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OCS Report
MMS 90-0015

Outer Continental Shelf

Oil & Gas Leasing/Production Program:

Annual Report/FY 1989

MMS U.S. Department of the Interior
Minerals Management Service

Outer Continental Shelf

OCS Report
MMS 90–0015

Oil & Gas Leasing/Production Program:

Annual Report/FY 1989

This report is submitted to the Congress of the United States pursuant to sections 15(1) and 22(g) of the Outer Continental Shelf Lands Act Amendments of 1978 (Public Law 95-372).

U.S. Department of the Interior
Minerals Management Service

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Foreword

The Minerals Management Service (MMS), an agency of the U.S. Department of the Interior, administers the Nation's Outer Continental Shelf (OCS) oil and gas program. The Federal OCS encompasses some 1.4 billion acres, of which approximately 33 million acres were under lease to oil and gas exploration, development, and production companies during the fiscal year ending September 30, 1989 (FY 1989).

In fulfilling its responsibilities under the Outer Continental Shelf Lands Act and other statutory mandates, MMS: (1) develops and maintains estimates of OCS oil and gas reserves and undiscovered resources; (2) assesses the likely effects of exploration, development, and production of oil and gas on the marine, coastal, and human environments; (3) administers competitive lease sales of suitable OCS tracts based upon resource estimates and environmental assessments; and (4) regulates and oversees the exploration, development, and production activities of lessees to assure that they are conducted safely and in an environmentally sound manner.

During FY 1989, the Federal OCS supplied almost one-fourth of all the natural gas produced in the United States and more than 10 percent of the Nation's oil production. The most recent estimates developed by the MMS resource evaluation program indicate that about 14 percent of the Nation's oil reserves and almost 24 percent of its natural gas reserves lie under the Federal OCS. Moreover, MMS geologists believe that about one-third of America's undiscovered oil resources and three-eighths of its natural gas resources that remain to be discovered are under the OCS. The OCS oil and gas program generated more than $2.9 billion in production royalties and lease-related revenues for the Government in FY 1989.

The safety and environmental record of the offshore industry during the past two decades has been excellent. Between 1971 and 1988, oil production from OCS wells averaged almost one million barrels per day. According to a recent study by the National Research Council (NRC), although more than 24,000 wells were drilled on the OCS from 1972 to 1986 (the period evaluated by the NRC), "no blowouts occurred that resulted in significant amounts of oil reaching shore, impacting sensitive environments, or causing loss of resources. Pollution prevention has been an increasingly important priority of the leaseholders and the MMS."[1]

However, in spite of this admirable record, there is no room for complacency. That is why MMS is increasing the number of unannounced spot inspections of offshore production and drilling facilities and anticipates that, as soon as the Congress provides new legislative authority, it will again be assessing civil penalties for serious infractions of its regulations.

Since 1974, MMS has spent over of a half billion dollars for more than a thousand studies relating to the effects of OCS development on the marine, coastal, and human environments. These studies have covered a wide range of topics, including physical oceanography, ecology, endangered species, and social and economic effects.

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[1] National Academy of Sciences, National Research Council, Marine Board, "Alternatives for Inspecting Outer Continental Shelf Operations," p. 18, March 1990.

The OCS oil and gas program has supplied about 85 percent of the funds spent by the Land and Water Conservation Fund, the Nation's primary source of funding for acquiring lands for national parks and other Federal outdoor recreation areas. Nearly $12 billion has been credited to the fund, through FY 1989, from OCS receipts. The fund also provides matching assistance for acquisition and development of State and local public outdoor recreation areas. Federal grants have been matched by State and local contributions for a total investment exceeding $6.1 billion.

OCS oil and gas receipts also provide up to $150 million each year to the Historic Preservation Fund. Moreover, under provisions of section 8(g) of the Outer Continental Shelf Lands Act, coastal States are entitled to 27 percent of the receipts from OCS leases located within the first 3 miles seaward of State coastal waters.

Shortly after taking office in January 1989, President Bush commissioned a Cabinet-level task force to assess the environmental concerns associated with pending lease sales in three OCS areas: offshore northern California, southern California, and in the eastern Gulf of Mexico southwest of Florida. The task force was chaired by Secretary of the Interior Manuel Lujan, Jr., and included the Secretary of Energy, the Director of the Office of Management and Budget, the Administrator of the Environmental Protection Agency, and the Administrator of the National Oceanographic and Atmospheric Administration of the Department of Commerce. Activities associated with the three lease sales were suspended at the direction of the President pending completion of the task force's assessment and his decision. The task force has submitted its report to the President and, as of this date, no decision has been announced.

Development of the next 5-year OCS program has begun, as required by the Outer Continental Shelf Lands Act. When completed and approved by the Secretary of the Interior, this 5-year plan will govern the agency's OCS leasing policies and activities during the period 1992-1997. This is the first 5-year OCS program that this Administration has had the opportunity to shape since taking office. The MMS intends to see that it fully reflects President Bush's and Secretary Lujan's commitment to stewardship of the Nation's natural resources and protection of the environment for the benefit of future generations.

Barry Williamson
Director
Minerals Management Service

Abbreviations and Acronyms

A

ANSI - American National Standards Institute
API - American Petroleum Institute
ASME - American Society of Mechanical Engineers

B

Bbbl - barrels

C

CDP - Common Depth Point
CFR - Code of Federal Regulations
CZMA - Coastal Zone Management Act

D

DST - Deep Stratigraphic Test

E

EGOM - Eastern Gulf of Mexico
EIS - Environmental Impact Statement
ELC - Egg Larval Committee
EPA - Environmental Protection Act
EP - Exploration Plan
ER - Environmental Report
ESA - Endangered Species Act
ESWS - Environmental Studies Working Session

F

FNOS - Final Notice of Sale
FPS - Floating Production System
FR - Federal Register
FRRE - Field and Reservoir Reserves Estimates
FWS - U.S. Fish and Wildlife Service
FY - Fiscal Year

G

G&G - Geological & Geophysical
GOA - Gulf of Alaska
GOM - Gulf of Mexico
GVS - Gas Verification System

I

ITM - Information Transfer Meetings

L

LVS - Liquid Verification System

M

MMbbl - million barrels
MMcf - million cubic feet
MMS - Minerals Management Service
MOU - Memorandum of Understanding
MRB - Modeling Review Board

N

NEPA - National Environmental Protection Act
NMFS - National Marine Fisheries Service
NOAA - National Oceanic and Atmospheric Administration
NOS - National Ocean Survey
NTL - Notice to Lessees

O

OCS - Outer Continental Shelf
OCSEAP - Outer Continental Shelf Environmental Assessment Program
OCSIP - Outer Continental Shelf Information Program
OCSIS - Outer Continental Shelf Information Systems
OCSLAA - Outer Continental Shelf Lands Act Amendments
OIP - Offshore Information and Publications
OIS - Offshore Inspection System
OSIM - Office of Strategic and International Minerals
OSRA - Oil-Spill Risk Analysis
OTAC - Operations Technology Assessment Committees

P

PNOS - Proposed Notice of Sale
PRESTO - Probabilistic Resource Estimates Offshore
PVP - Platform Verification Program

R

RTWG - Regional Technical Working Group

S

SID - Secretarial Issue Document
SWEPI - Shell Western E&P, Inc.

T

TA&R - Technology Assessment and Research
Tcf - trillion cubic feet

U

U.S.C. - U.S. Code
USCG - U.S. Coast Guard
USGS - U.S. Geological Survey

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Executive Summary

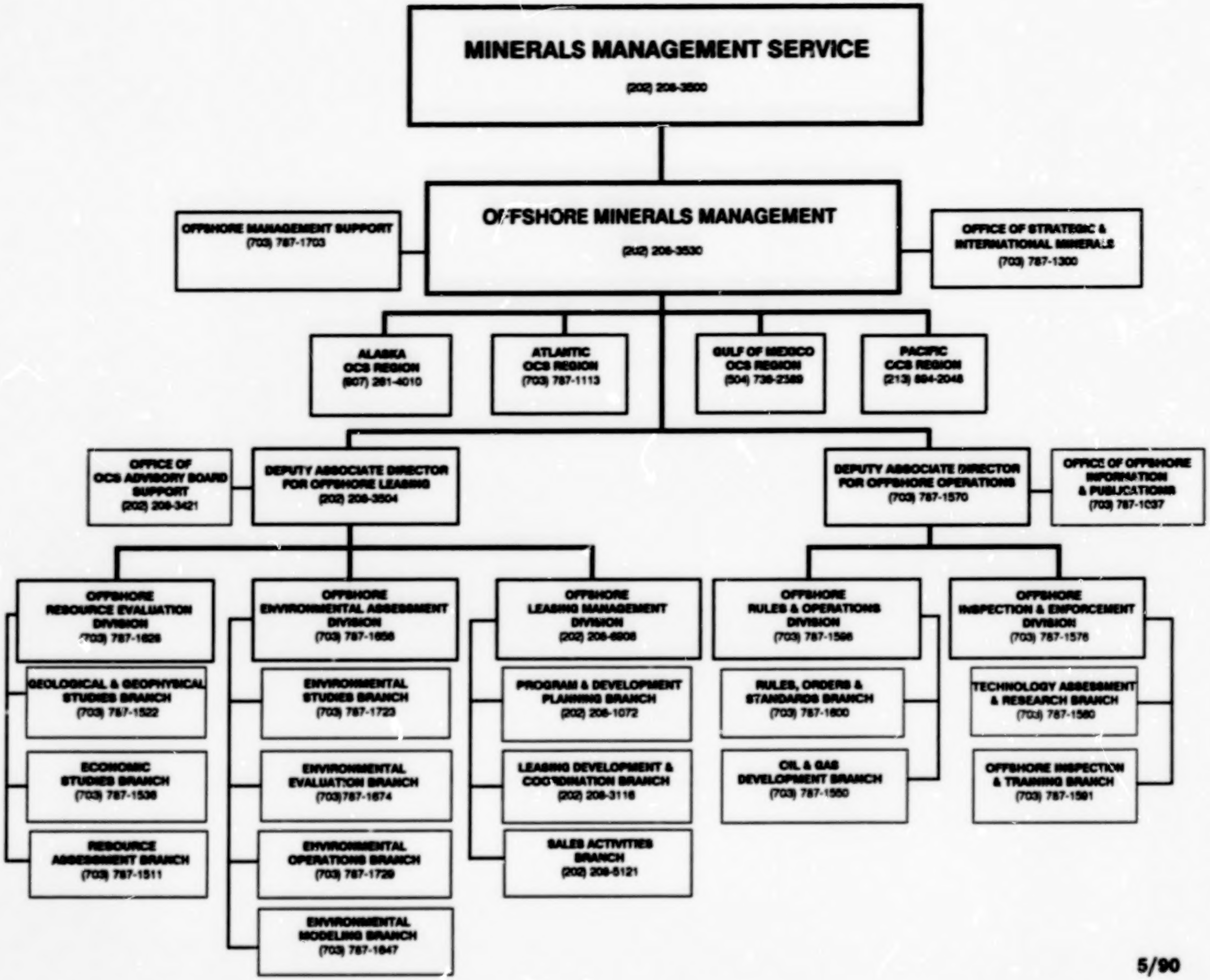
As the Congress declares in the Outer Continental Shelf Lands Act (OCSLA), the oil and gas production from the Outer Continental Shelf (OCS) constitutes an important part of the Nation's domestic energy supply. (See Introduction, page 1.) The OCS is administered within the Department of the Interior, by the Minerals Management Service (MMS), which provides access to potential new sources of oil and gas offshore by conducting lease sales. (See MMS Organizational Chart.) Each year, on or before March 31, the MMS as mandated by OCSLA, presents to Congress a fiscal year annual report on the OCS oil and gas leasing and production program. In FY 1989, the MMS with its OCS oil and gas leasing and production program was the fourth largest producer of revenue for the U.S. treasury at more than $2.9 billion. The following summarizes the leasing and production activities on the OCS during FY 1989.

Four OCS lease sales were held during FY 1989, offering a total of 19,162 tracts on 106.5 million acres in the Gulf of Mexico OCS Region and 990 tracts on 5,603,473 acres in the Alaska OCS Region. (See figure 1, page 5, for regional planning areas and table 1, page 4, for details.)

The first sale, Sale 92, held October 11, 1988, offered 990 tracts on 5,603,473 acres in the North Aleutian Basin, offshore Alaska. Bids were received for 23 tracts covering 121,757 acres. High-bid bonuses amounting to $95,439,500 were deemed adequate and accepted. Leases were awarded for 23 tracts. The average bid for the 23 leases was $783.87 per acre; the first-year rents totaled $394,208 for the 121,757 acres leased to date.

The second sale in FY 1989, Sale 116--Part I, held on November 16, 1988, offered 8,149 tracts on 46,417,392 acres in the Eastern Gulf of Mexico Planning Area, excluding the area south of 26° North latitude and east of 86° West longitude. Bids were received for 115 tracts on 657,349 acres. Total high bids amounted to $41,582,298. High-bid bonuses of $16,621,194 were accepted for 32 tracts. Sale 116--Part I had 83 tracts with bids deemed adequate, subject to military stipulation, which were pending issue at the end of FY 1989. The average bid was $92.72 per acre; the first-year rents totaled $537,807 for the 179,268 acres leased.

The third sale, Sale 118, held March 15, 1989, offered 5,970 tracts on 32,123,675 acres in the Central Gulf of Mexico Planning Area. Bids were received for 591 tracts covering 2,972,567 acres. Total high bids amounted to $397,513,998. High-bid bonuses amounting to $388,393,077 were deemed adequate and accepted. This amount included a 1/5 bonus totaling $29,460 forfeited on a high bid for which no lease was issued. Leases were awarded for 574 tracts. The average bid was $134.28 per acre; the first-year rents totaled $8,677,605 for the 2,892,487 acres leased.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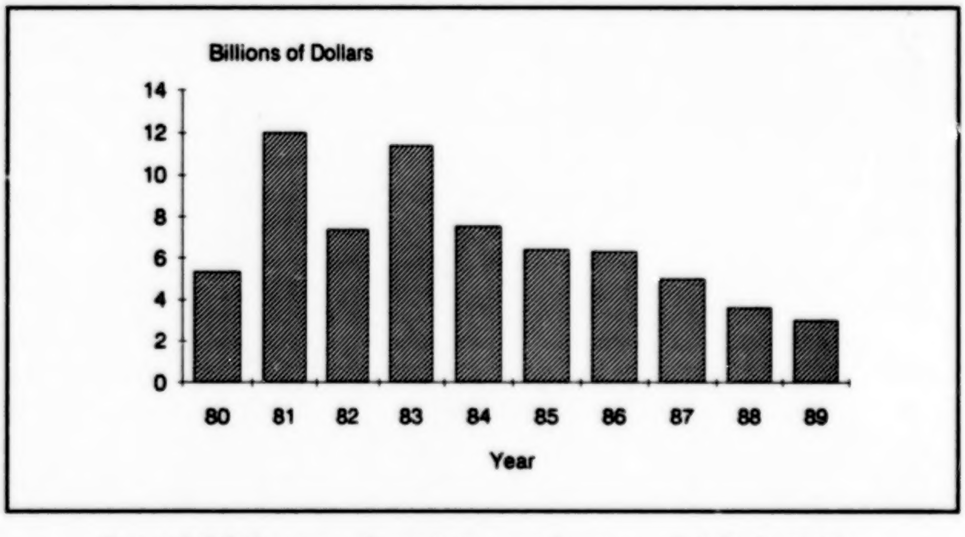
The fourth sale, Sale 122, held on August 23, 1989, offered 5,043 tracts on 27,973,997 acres in the Western Gulf of Mexico Planning Area. Bids were received for 488 tracts covering 2,759,424 acres. Total high bids amounted to $263,753,883. High-bid bonuses amounting to $257,224,333 were accepted for 475 tracts. The average bid was $95.68 per acre; the first-year rents totaled $8,065,182 for the 2,688,380 acres leased.

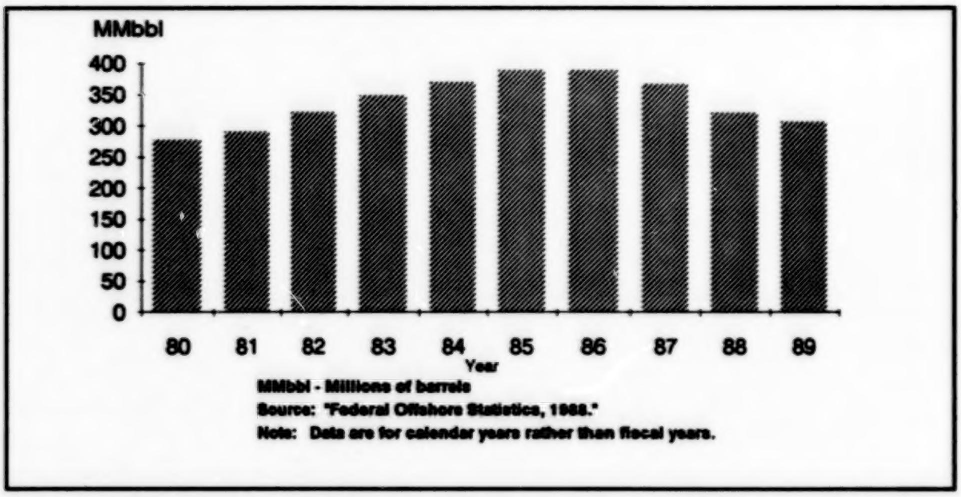
Of the 20,152 tracts (112,118,537 acres) offered in the four OCS sales, 1,104 tracts were leased (5,881,937 acres). An additional 83 tracts subject to military stipulation received high bids deemed adequate and were pending lease issuance as of the end of FY 1989. Accepted high-bid bonuses amounted to $757,678,104. Another $15,650,471 in bonuses were rejected as insufficient and returned to the bidders. The 1,655 bids received on 1,217 tracts resulted in 1,104 successful bids. First-year rents amounted to $17,674,802 for the leases executed to date. (See table 1 for details.)

Offshore program receipts received by MMS during FY 1989 amounted to $867,545,267 in bonuses and rents; $2,061,666,495 in royalties; and $1,447,667 in interest on escrow released for total receipts of $2,930,659,429. In addition, $62,351,979 were added to the escrow accounts, bringing total OCS program receipts submitted to the Royalty Management Program to $2,993,011,408. (See page 53.) Total obligations and expenditures for the Offshore Minerals Management Program were estimated at $90,681,625 in FY 1989. The figure below shows the total program receipts and escrow in billions of dollars over the past decade.



Total OCS Program Receipts and Escrow, FY 1980-1989

Production of oil and gas on the OCS in FY 1989 amounted to nearly 315 million barrels of crude oil and condensate and over 4.2 trillion cubic feet of natural gas (see figure below and table 9). Oil produced on the OCS amounted to 10.2 percent of total U.S. oil production during FY 1989, and natural gas produced on the OCS was 24.2 percent of total U.S. gas production (see page 22).



MMbbl - Millions of barrels

Source: "Federal Offshore Statistics, 1988."

Note: Data are for calendar years rather than fiscal years.

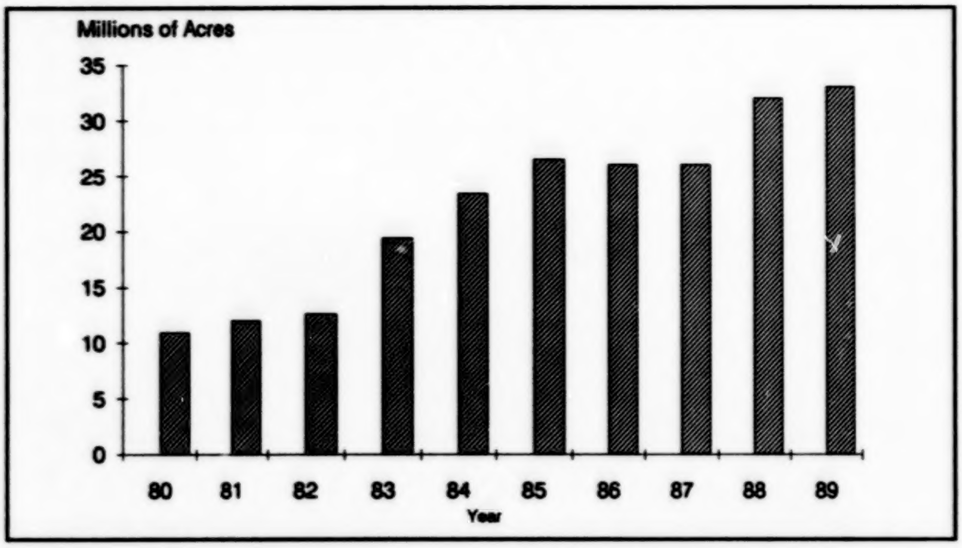
Annual OCS Crude and Condensate Production in Millions of Barrels, Calendar Years 1980-1989

All OCS production came from the Gulf of Mexico and offshore California. During FY 1989, there were 466 exploratory wells and 424 development wells started (see tables 5 and 6). The list below summarizes the 6,367 active Federal leases and the location of the nearly 33 million acres of the Federal offshore acreage under lease at the end of FY 1989.

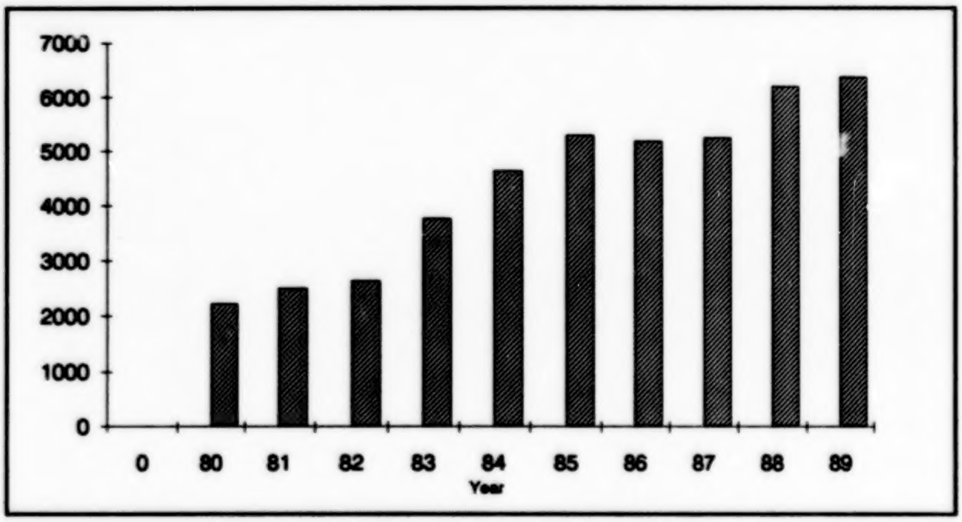
Active Federal Leases and Acres Under Lease Located on the OCS

Offshore Region	Active Leases	Acres Under Lease
Alaska OCS	938	5,168,479
Atlantic OCS	71	404,216
Gulf of Mexico OCS	5,228	26,671,953
Pacific OCS	130	671,752
Totals as of 09/30/89	**6,367**	**32,916,40**

The following two figures graphically portray the acres leased and the active leases on the OCS by fiscal year for the past decade.



Acres Under Lease on the OCS, FY 1980-1989



Active Leases on the OCS, FY 1980-1989

From the OCS program's inception in October 1954 through September 1989, the Department of Interior has held 104 OCS lease sales, including 2 reoffering sales. Of these, 97 were oil and gas lease sales; 2 were salt sales; 2 were sulphur sales; 1 was an oil, gas, and sulphur sale; 1 was a phosphate sale; and 1 was a sulphur and salt sale. The six leases issued from the phosphate sale were relinquished because hazards from unexploded ordnance in the lease area precluded development. All bonuses and first-year rents paid by the successful bidder were returned by the Federal Government. Bonuses paid by industry for all leased Federal offshore tracts from FY 1954 through FY 1989 totaled $55.2 billion, and another $37.5 billion has been received in royalties. About 8.5 billion barrels of crude oil and condensate and 87 trillion cubic feet of natural gas have been produced from these leases. (See map, figure 1, page 5.)

Pursuant to 33 CFR Part 140.40, the U.S. Coast Guard forwarded the following reports to the MMS for either administrative or judicial action during FY 1989. The Coast Guard conducted 30 investigations on 1,924 reports of allegations or violations of safety regulations at 3,465 OCS facilities. Coast Guard personnel conducted 609 inspections among the 3,871 OCS facilities in Federal waters. No reports of violations were forwarded for administrative or judicial action in accordance with procedures outlined in 33 CFR Part 140.40. (These OCS inspections included 2,856 Self-Inspections of fixed platforms within the 8th and 11th Districts by owners/operators in accordance with the new Coast Guard Self-Certification Program effective as of June 27, 1988.) The 30 Coast Guard investigations resulted in the issuance of 1,233 corrective action requirements. There were 1,263 more reports or allegations of violations in FY 1989 than in FY 1988. In addition, the number of investigations decreased from 86 in FY 1988 to 30 in FY 1989. (See Inspection and Enforcement, page 31 for information on MMS inspections.)

Introduction

Mandate for the *Annual Report to Congress*

Pursuant to section 15(1) of the Outer Continental Shelf Lands Act (OCSLA), 43 U.S.C. 1343(1), as amended, this annual report on the Outer Continental Shelf (OCS) Oil and Gas Leasing and Production Program for fiscal year (FY) 1989 is submitted to the Congress of the United States. The document summarizes receipts and expenditures and, in compliance with section 22(g) of the Act, includes information on OCS safety violations as reported by the U.S. Coast Guard.

The OCSLA (43 U.S.C. 1331 et seq.), enacted in 1953 and amended by the OCSLA Amendments (OCSLAA) of 1978 and 1985 and by the OCS Paperwork and Reporting Act (amending 43 U.S.C. 1343, 1861 and 1865 (1986)), charges the Secretary of the Interior with the responsibility for administering the management of mineral exploration and development, as well as for conserving the natural resources, of the OCS.

The Act, as amended, defines the national policy for managing the oil and natural gas resources of the OCS and its resulting goals. These goals for the comprehensive management of oil and natural gas production in the offshore marine environment include:

- ensuring orderly and timely exploration and development of mineral resources to meet the energy needs of the Nation;

- providing for optimal protection of the environment concurrent with efficient, economic mineral resource development; and

- ensuring that fair market value is received for the lands leased and the rights conveyed by the Federal Government.

Background Information

The Annual Report (AR), produced by the MMS's Office of Offshore Information and Publications, is a compilation of facts and data gathered from the agency's Alaska, Atlantic, Gulf of Mexico and Pacific regional offices, as well as, Headquarters. The U.S. Coast Guard also is mandated by Congress to contribute information on the Coast Guard's administrative or judicial actions on the OCS for each fiscal year.

This year a series of bar graphs and charts have been added to represent statistical data in a new format that spans the past decade. The data for the charts are taken from tables in the *Annual Reports* of 1980-1988 and data collected for this report, unless otherwise noted.

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Federal Leasing And Operations

Fiscal Year 1989 OCS Oil and Gas Lease Sales

During fiscal year (FY) 1989, the Minerals Management Service (MMS) held four oil and gas lease sales (92, 116--Part I, 118, and 122), offering for lease a total of 20,152 tracts on 112,118,537 acres. (Included in this tally is North Aleutian Basin Sale 92. This sale was originally scheduled for January 15, 1986, but, because of litigation, bids were not opened until October 11, 1988.) For the four Outer Continental Shelf (OCS) sales, industry submitted 1,655 bids resulting in $798,289,679 in high-bid bonuses for 1,217 tracts covering 6,511,097 acres. Accepted high-bid bonuses totaled $757,678,104 for 1,104 tracts covering 5,881,937 acres. First-year rents amounted to $17,674,802 for those leases. These sales are summarized in table 1.

OCS Sales Deferred in FY 1989

The following OCS sales did not occur in FY 1989. Figure 1 shows the plannning areas for all proposed and deferred sales in the 5-Year OCS Oil and Gas Leasing Program, Mid-1987 to Mid-1992. Figure 2 lists the sales in the 5-Year Program as of September 30, 1989.

Sales 91 and 95, Northern and Southern California, Respectively: The remaining steps in the presale process were not scheduled because President Bush created the OCS Leasing and Development Task Force to review the leasing proposal. The MMS continued to gather and analyze data and information on selected offshore areas for use by the task force. The task force findings were to be presented to the President by January 1, 1990. (See figure 2 for the current 5-year leasing schedule.)

Sales 96 and 134, North Atlantic: These sales were suspended because of restrictions included in the FY 1989 Interior Appropriations Act.

Sale 101, St. George Basin: The scheduled sale date was February 1990. However, the draft environmental impact statement (EIS) was delayed.

Sale 108, South Atlantic: Because of limited industry interest, this sale has been rescheduled for April 1992 .

Sale 114, Gulf of Alaska/Cook Inlet: The Area Identification was approved September 1, 1988. However, on May 17, 1989, the sale was delayed for 1 year to allow time to assess the relationship of the Exxon *Valdez* oil spill in Prince William Sound with the sale proposal. The sale is now scheduled for September 1991.

Sale 116--Part II, Eastern Gulf of Mexico: This area, which is situated south of 26° North latitude, is under a 1-year leasing moratorium. The area in the eastern Gulf of Mexico lying south of 26° North latitude and east of 86° West longitude has also been excluded from Eastern Gulf Sale 137.

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Table 1. *Summary of OCS Oil and Gas Lease Sales Held by the MMS During FY 1989*

Lease Offering	Sale/Bid Opening	Royalty Rate of Leased Tracts	Tracts Lease Terms	OCS Leases High Bid Bonuses	Issued
Sale 92 North Aleutian Basin 990 tracts 5,603,473 acres	10/11/88 23 bids 23 tracts 121,754 acres	16 2/3% for 0 tracts 12 1/2% for 23 tracts	0 at 5 yr 0 at 8 yr 23 at 10 yr	$95,439,500 rec. $95,439,500 acc. $0 rej. $0	23 tracts 121 acres $783.87 avg./acre $394,208 yr rents
Sale 116(I) Eastern GOM 8,149 tracts 46,417,392 acres	11/16/88 135 bids 115 tracts 657,349 acres	16 2/3% for 20 tracts 12 1/2% for 12 tracts	20 at 5 yr 0 at 8 yr 12 at 10 yr	$41,582,298 rec. $16,621,194 acc. $0 rej. $24,961,104 pending	32 tracts 179,268 acres $92.72 avg./acre $537,804 yr rents
Sale 118 Central GOM 5,970 tracts 32,123,675 acres	3/15/89 821 bids 591 tracts 2,972,567 acres	16 2/3% for 416 tracts 12 1/2% for 158 tracts	416 at 5 yr 43 at 8 yr 115 at 10 yr	$397,513,998 rec. $388,422,537 acc. $ 9,120,921 rej.	574 tracts 2,892,535 acres $134.28 avg./acre $8,677,605 yr rents
Sale 122 Western GOM 5,043 tracts 27,973,997 acres	8/23/89 676 bids 488 tracts 2,759,424 acres	16 2/3% for 259 tracts 12 1/2% for 216 tracts	259 at 5 yr 37 at 8 yr 179 at 10 yr	$263,753,883 rec. $257,224,333 acc. $ 6,529,550 rej. $0	475 tracts 2,688,380 acres $95.68 avg./acre $8,065,140 yr rents
Total FY 1989 OCS Sales: 4	Total Bids Received: 1,655	Total Tracts 16 2/3% (1/6): 695	Total Leases at 5 yr: 695	Total Bonuses Recieved: $798,289,679	Total Tracts Leased: 1,104
Total Tracts Offered: 20,152	Total Tracts Bid on: 1,217	Total Tracts at 12 1/2%: 409	Total Leases at 8 yr: 80	Total Bonuses Accepted: $757,707,564	Total Acres Leased: 5,881,937
Total Acres Offered: 112,118	Total Acres Bid On: 6,511,094		Total Leases at 10 yr: 329	Total Bonuses Rejected: $15,650,471	Total First-Year Rents: $17,674,757

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* There are 98 tracts subject to Military Stipulation not yet issued.

** This figure includes 1/5 bonus (totaling $29,460) forfeited on a high bid for which no lease was issued

ac. = acres rec. = receipts rej. - rejected acc. = accepted

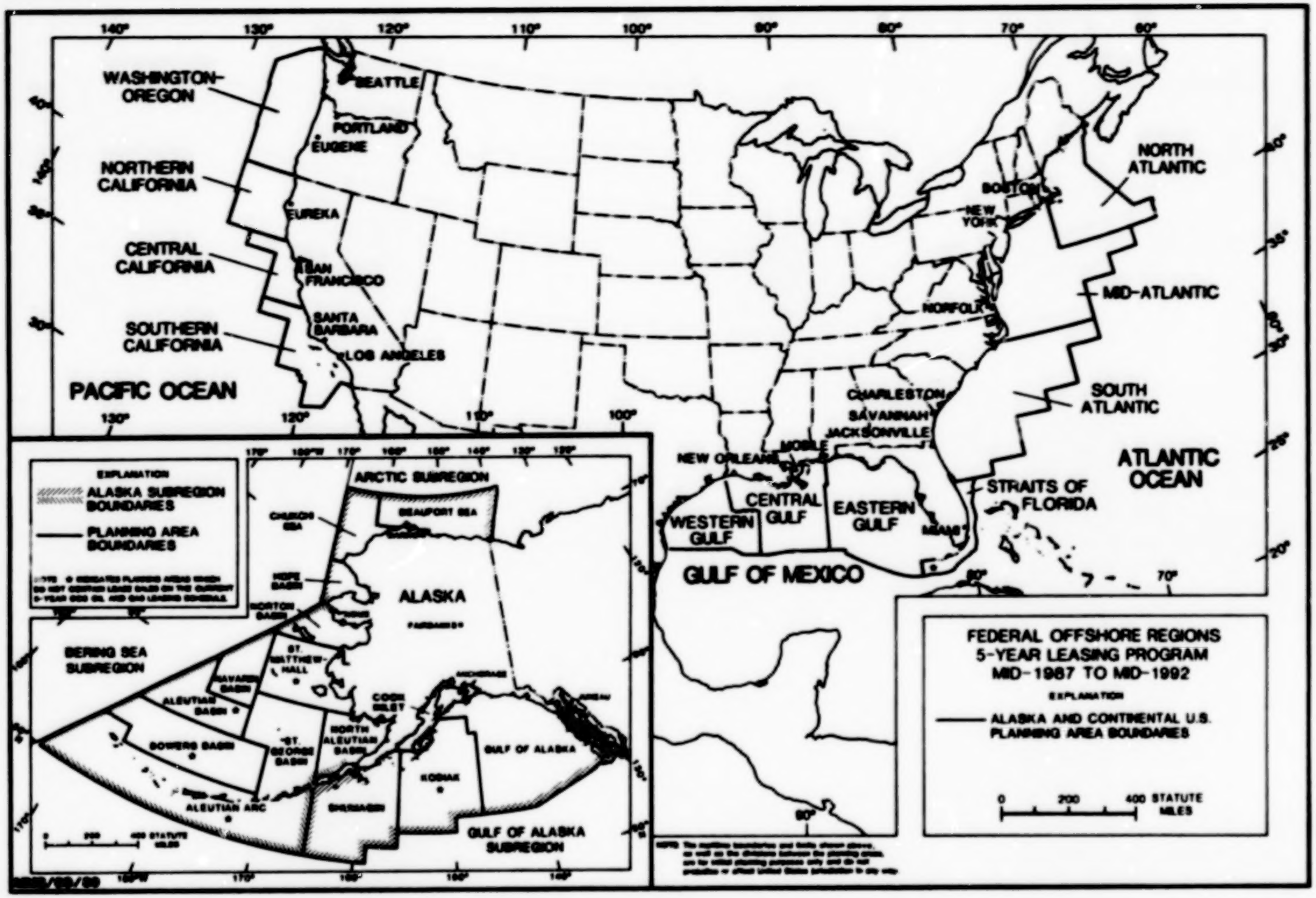

Figure 1. *The 26 Planning Areas of the 5-Year OCS Oil and Gas Leasing Program, Mid-1987 to Mid-1992.*

The maritime boundaries and limits shown above, as well as the divisions between the planning areas, are for initial planning purposes only and do not prejudice or affect United States jurisdiction in any way.

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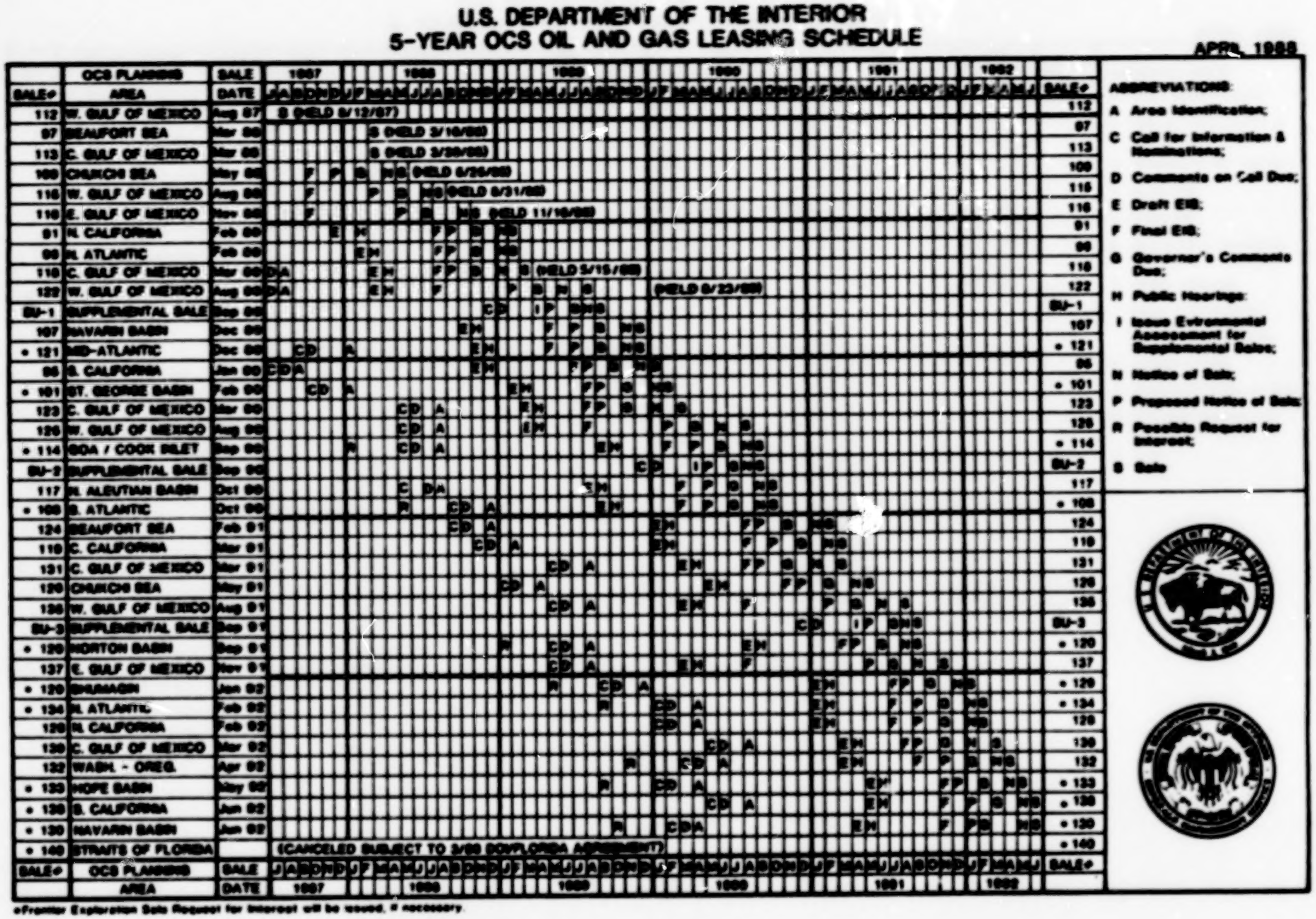


U.S. DEPARTMENT OF THE INTERIOR
5-YEAR OCS OIL AND GAS LEASING SCHEDULE

APRIL 1988

SALE#	OCS PLANNING AREA	SALE DATE	1987 1988 1989 1990 1991 1992	SALE#
112	W. GULF OF MEXICO	Aug 87	S (HELD 8/12/87)	112
97	BEAUFORT SEA	Mar 88	S (HELD 3/10/88)	97
113	C. GULF OF MEXICO	Mar 88	S (HELD 3/30/88)	113
109	CHUKCHI SEA	May 88	F P D NS (HELD 5/26/88)	109
115	W. GULF OF MEXICO	Aug 88	F P D NS (HELD 8/31/88)	115
116	E. GULF OF MEXICO	Nov 88	F P D NS (HELD 11/16/88)	116
91	N. CALIFORNIA	Feb 89	E H F P D NS	91
90	N. ATLANTIC	Feb 89	E H F P D NS	90
118	C. GULF OF MEXICO	Mar 89	D A E H F P D N S (HELD 5/15/89)	118
122	W. GULF OF MEXICO	Aug 89	D A E H F P D N S (HELD 8/23/89)	122
SU-1	SUPPLEMENTAL SALE	Sep 89	C D I P D N S	SU-1
107	NAVARIN BASIN	Dec 89	E H F P D NS	107
• 121	MID-ATLANTIC	Dec 89	C D A E H F P D NS	• 121
95	S. CALIFORNIA	Jan 90	C D A E H F P D NS	95
• 101	ST. GEORGE BASIN	Feb 90	C D A E H F P D NS	• 101
123	C. GULF OF MEXICO	Mar 90	C D A E H F P D N S	123
125	W. GULF OF MEXICO	Aug 90	C D A E H F P D N S	125
• 114	GOA / COOK INLET	Sep 90	R C D A E H F P D NS	• 114
SU-2	SUPPLEMENTAL SALE	Sep 90	C D I P D N S	SU-2
117	N. ALEUTIAN BASIN	Oct 90	C D A E H F P D NS	117
• 108	S. ATLANTIC	Oct 90	R C D A E H F P D NS	• 108
124	BEAUFORT SEA	Feb 91	C D A E H F P D NS	124
119	C. CALIFORNIA	Mar 91	C D A E H F P D NS	119
131	C. GULF OF MEXICO	Mar 91	C D A E H F P D N S	131
126	CHUKCHI SEA	May 91	C D A E H F P D NS	126
135	W. GULF OF MEXICO	Aug 91	C D A E H F P D N S	135
SU-3	SUPPLEMENTAL SALE	Sep 91	C D I P D N S	SU-3
• 120	NORTON BASIN	Sep 91	R C D A E H F P D NS	• 120
137	E. GULF OF MEXICO	Nov 91	C D A E H F P D N S	137
• 129	SHUMAGIN	Jan 92	R C D A E H F P D NS	• 129
• 134	N. ATLANTIC	Feb 92	R C D A E H F P D NS	• 134
128	N. CALIFORNIA	Feb 92	C D A E H F P D NS	128
139	C. GULF OF MEXICO	Mar 92	C D A E H F P D N S	139
132	WASH. - OREG.	Apr 92	R C D A E H F P D NS	132
• 133	HOPE BASIN	May 92	R C D A E H F P D NS	• 133
• 138	S. CALIFORNIA	Jun 92	C D A E H F P D NS	• 138
• 130	NAVARIN BASIN	Jun 92	R C D A E H F P D NS	• 130
• 140	STRAITS OF FLORIDA		(CANCELED SUBJECT TO 3/89 DOI/FLORIDA AGREEMENT)	• 140

ABBREVIATIONS:

- A Area Identification;
- C Call for Information & Nominations;
- D Comments on Call Due;
- E Draft EIS;
- F Final EIS;
- G Governor's Comments Due;
- H Public Hearings;
- I Issue Environmental Assessment for Supplemental Sales;
- N Notice of Sale;
- P Proposed Notice of Sale;
- R Possible Request for Interest;
- S Sale

•Frontier Exploration Sale Request for Interest will be issued, if necessary.

Figure 2. *The Department of the Interior's 5-Year OCS Oil and Gas Leasing Schedule as of September 30, 1989.* (Work on some of these sales has been delayed.)

Sale 119, Central California: The last step completed for this sale was the issuance of the Call for Information and Nominations, published in November 1988. The Call requested information on concerns regarding potential leasing in the area and solicited indications of industry interest. The Call also announced a new effort by MMS to receive more detailed information from interested parties on the environmental sensitivity of specific areas and resources -- the sensitive tract evaluation process. The next step in the process, Area Identification, was scheduled for April 1989 but has not been issued. The Department of the Interior is reviewing information received in response to the Call.

Sale 121, Mid-Atlantic: This sale has been delayed 10 months (until mid-1991), while the environmental report (ER) for the exploration plan of Mobil Oil Exploration and Producing Southeast, Inc. is being prepared. This delay is to avoid any confusion that could result from overlapping public review processes.

Sale 128, Northern California: Sale schedule will depend on actions taken by the President following completion of the OCS Leasing and Development Task Force effort.

Sale 138, Southern California: Sale schedule will depend on actions taken by the President following completion of the OCS Leasing and Development Task Force effort.

Sales Activities in Progress

Listed on the current 5-Year OCS Oil and Gas Leasing Program are 29 OCS oil and gas lease sales. As noted above, work on some of these sales has been delayed. The sales in progress are listed below.

Sale 107, Navarin Basin: Work on the draft EIS is currently in progress.

Sales 123 and 125, Central and Western Gulf of Mexico: The final EIS was released August 25, 1989, and included comments received during the public review process. A Notice of Availability of the Proposed Notice of Sale 123 was subsequently published.

Sale 124, Beaufort Sea: Work on the draft EIS is currently in progress, and the draft EIS is scheduled for release to the public early in 1990.

Sale 126, Chukchi Sea: The decision on the Area Identification was made on May 9, 1989, and consisted of about 24 million acres on 4,000 tracts. The Area Identification reflects a decision to eliminate about 6 million acres from consideration in this sale to create a buffer zone. Work on the draft EIS is currently in progress, and the draft EIS is scheduled for release to the public in the spring of 1990.

Sales 131, 135, and 137, Central, Western, and Eastern Gulf of Mexico Respectively: A Call for Information and Nominations was published May 2, 1989, in the *Federal Register*. The eastern Gulf of Mexico (GOM) area south of 26° North latitude and east of 86° West longitude was not included in the Call. The Area Identification decision was made August 31, 1989, and reflected all of the deferrals committed in the current 5-year program. The draft EIS for the three sales will be released to the public in the spring of 1990.

Sale 132, Washington-Oregon: The Pacific Northwest Task Force has met several times to discuss such topics as environmental studies, area deferrals, and EIS timing. A Request for Interest is likely to be delayed.

OCS Mining Program: Norton Sound Lease Sale: A Federal-State coordination team was established February 5, 1988. A Request for Comments and Nominations and Notice of Intent to Prepare an Environmental Impact Statement was published March 11, 1988. The Area Identification was approved May 27, 1988; a draft EIS was published November 29, 1988, and a public hearing was held January 5, 1989. Because new information is now available, the draft EIS is being revised and should be completed in June 1990.

Table 2 summarizes the major action steps and documents the MMS completed in FY 1989 for the prelease phases of the OCS leasing process.

Table 2. *FY 1989 Prelease Activities of OCS Leasing Process*

FY 1989 Activity/Document	Number Completed
Request for Comments	1
Request for Interest	2
Call for Information	3
Supplemental Call	1
Area Identification	3
Draft Environmental Impact Statement	2
Final Environmental Impact Statement	1
Proposed Notice of Sale	1
Secretarial Issue Document	2
Final Notice of Sale	2
Sales Conducted	4

The MMS also completed and processed the following documents in FY 1989:

Section 19 Letters: Section 19 of the OCSLA, as amended, provides for "Coordination and Consultation with the Affected States." The section 19 letters forward copies of proposed Notices of Sales to the Governors of affected States. They also invite recommendations within 60 days regarding the size, timing, and location of the proposed lease sale. Two section 19 letters were sent on Sale 122, Western Gulf of Mexico, in FY 1989.

Section 19(c) Balancing Letters: Section 19(c) of the OCSLA requires that the Secretary of the Interior furnish his reasons for accepting or rejecting State recommendations regarding the size, timing, or location of a proposed lease sale or for implementing any alternative means to provide for a reasonable balance between the national interest and the well-being of the citizens of an affected State. Three such balancing letters were sent on Sale 116--Part II, Eastern Gulf of Mexico, and two balancing letters were sent for Sale 123, Western Gulf of Mexico in FY 1989.

Administration of OCS Leases

Lease activity administered by the MMS during FY 1989 is summarized in table 3. Compared with the FY 1988 lease activities administered, the MMS in FY 1989 processed 1,702 more assignments of interest and 29 more applications for lease term pipelines, 17 more applications for pipeline rights-of-way, 59 more platform applications, and approved 163 fewer exploration plans and 115 fewer well starts on the OCS.

Table 3. *Administration of OCS Oil and Gas Leases During FY 1989*

Lease Activities	Alaska	Atlantic	Gulf of Mexico	Pacific	FY 1989 Total
Assignments of Interest	479	7	2,186	31	**2,703**
Relinquishments	81	7	265	0	**353**
Terminations	0	0	105	5	**110**
Expirations	0	0	320	0	**320**
Pipelines					
Lease Term Applications Approved	0	0	208	0	**208**
Lease Term Miles	0	0	278	0	**278**
Right-of-way Applications Approved	0	0	102	0	**102**
Right-of-way Miles	0	0	496	0	**496**
Production Platforms in Federal Waters					
Applications Approved	0	0	258	N/A	**258**
Under Supervision as of 09/30/89	0	0	3,706	22*	**3,728**
Postlease Plans Approved					
Exploration Plans	4	0	439	0	**443**
Development/Production Plans	0	0	215	0	**215**
Well Drilling Action					
Wells Plugged and Abandoned	3	0	309	7	**319**
Exploratory Well Starts	3	0	458	5	**466**
Development Well Starts	0	0	409	15	**424**
Total Well Starts:	3	0	867	20	**890**

*Pacific OCS Region's platform count does not include the offshore storage and treatment facility.

Exploration Activities

The level of exploration activity in Federal OCS waters during FY 1989 can be evaluated by the number of geological and geophysical (G&G) permits issued, exploration plans (EP) submitted and approved, and exploratory wells started.

The issuance of G&G permits is a prelease resource appraisal activity, and exploration plans and exploratory well drilling are considered postlease activities. Geological activities include core and test drilling and bottom-sampling to obtain data on hydrocarbon or mineral resource potential. Geophysical activities refer to any operations using geophysical techniques to help identify areas of hydrocarbon potential. Information from G&G activities also can provide an early warning to potentially hazardous drilling areas.

The petroleum industry decreased exploration activities for offshore oil and gas in Federal waters in FY 1989, as compared with FY 1988. Prelease permitting and postlease operations declined to 239 G&G permits issued in FY 1989 from 321 last year, (table 4). One deep stratigraphic test (DST) well was drilled in the Central Gulf of Mexico in FY 1989. Total postlease approvals for the entire OCS were given to 443 exploration plans, as compared with 606 in FY 1988. One draft exploration plan was submitted for the Atlantic OCS, Mid-Atlantic Planning Area, for exploratory drilling by Mobil and Partners.

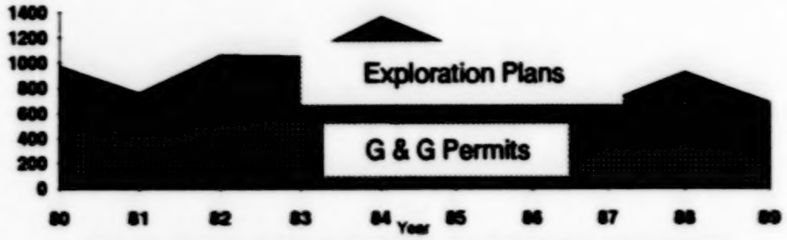
Table 4. *Prelease Geological and Geophysical Data Acquisition Activities for FY 1989*

Offshore Planning Region	Seismic Data Line Miles Acquired*	No. of G&G Permits Issued
Alaska OCS	3,131	16
Atlantic OCS	1,635**	0
Gulf of Mexico OCS	42,877	221
Pacific OCS	4,507	2
Total:	**52,155**	**239**

* Data acquired in FY 1989 by the MMS may result both from surveys permitted during that or earlier fiscal years and only includes deep penetration Common Depth Point (CDP) reflection data.

** Estimated

Of the 239 G&G permits the MMS issued in FY 1989, there were 221 for the Gulf of Mexico, 16 for Alaska, 2 for the Pacific, and none for the Atlantic. Of the 221 G&G permits issued by the Gulf of Mexico OCS Region, 217 were geophysical and 4 were geological permits. (See figure 3.) The Gulf of Mexico's permit activity dropped 18 percent from last year's total of 271. The MMS also acquired 52,155 line miles of geophysical data during FY 1989.



Data may have been acquired by the MMS in a given fiscal year from surveys permitted during that or previous fiscal years.

Figure 3. *OCS Exploration Plans Approved and Geophysical & Geological Permits Issued, FY 1980-1989*

Geological data gathered under permits are used to study hydrocarbon or mineral resource potential and are derived from core holes, test wells, and various bottom-sampling methods. The physical examination of subsurface rock specimen formations also produce data on hydrocarbon or mineral resource potential. Geophysical surveys involve any operations that use seismic, electrical, gravity, magnetic, and electromagnetic methods to obtain structural and stratigraphic data that identify areas having hydrocarbon trapping potential. Such G&G information may also be used to identify areas with potentially hazardous drilling conditions.

Analysis of these data is a major step in the resource evaluation that the MMS must perform before scheduling OCS lease sales. The MMS geophysicists and geologists interpret the data and prepare maps of target horizons on subsurface structures. The maps form the core of all tract evaluation efforts and are--together with geological, engineering, and economic data--the basic criteria the MMS uses to determine bid adequacy for tracts offered at OCS lease sales and to make necessary decisions before the lease sales. Prospect and reservoir evaluation are also used to develop estimates of undiscovered resources and for planning purposes, such as the development of the 5-Year Leasing Oil and Gas Program.

Sometimes industry drills DST wells before any lease sales occur. Since these wells are intended only to obtain geological information and not to identify or remove oil or gas from hydrocarbon reservoirs, they are usually drilled off-structure. Most DST wells are financed by consortiums of several companies that share the cost of these test wells, thus eliminating the proliferation of test wells on the OCS and reducing the cost per participant.

Exploration activities for FY 1989 are shown in table 5. The Gulf of Mexico OCS Region continues to dominate the offshore area for both prelease and postlease activities. Total exploration plans for the OCS submitted in FY 1989 were 481 for the Alaska, the Gulf of Mexico, and the Pacific OCS Regions, compared with 585 in FY 1988. Overall, exploratory drilling showed a 22 percent decrease with 466 wells started compared to the 597 wells started the previous year.

Table 5. *Exploration Activities on OCS Oil and Gas Leases, FY 1989*

Exploration Activities	Alaska	Atlantic	Gulf of Mexico	Pacific	FY 1989 Totals
G&G Permits Issued	16	0	221	2	239
DST Well Starts	0	0	1	0	1
Exploration Plans					
Submitted	4	1*	476	0	481
Approved	4	0	439	0	443
Disapproved	0	0	0	0	0
Pending	0	1	57	0	58
Exploratory Wells					
Starts	3	0	458	5	466

*Draft Exploration Plan

Alaska: In the Alaska OCS Region, three exploratory wells were started, 1 in the Beaufort Sea and 2 in the Chukchi Sea.

- Chevron drilled a well from an ice island at the Karluk Prospect, located on the State-Federal boundary in the Beaufort Sea, Sale BF area. Because the well was projected to cross onto a Federal lease, MMS permitted and inspected it. The final bottom-hole location did not cross onto Federal land.

- Shell Western E&P Inc. (SWEPI) drilled the second well at the Klondike Prospect in the Chukchi Sea. It was spudded on July 9, 1989, using the *Explorer III* drillship, and completed on September 15, 1989.

- The third well was spudded by SWEPI on September 22, 1989, at the Burger Prospect in the Chukchi Sea. This well was temporarily abandoned in October. During the summer of 1990, SWEPI plans to return to the Chukchi Sea to complete the Burger well and, if ice conditions permit, drill an additional well on the Popcorn Prospect.

- In addition, Amoco Production Company completed drilling a well located at the Belcher Prospect, OCS-Y 0917, in the Beaufort Sea. This well required two seasons to drill and was completed on August 29, 1989.

At the end of FY 1989, a total of 71 exploratory wells had been drilled on the Alaska OCS.

- The SWEPI conducted preliminary activities (geophysical site-clearance surveys) on 5 prospects in the Sale 109 Chukchi Sea area last summer.

- Texaco has indicated an intent to submit an exploration plan (EP) for the Sale 109 area in FY 1990, proposing to drill one or more exploratory wells starting in 1990. Mobil also has made numerous inquiries concerning EP requirements.

- Amoco had an EP for the Galahad Prospect in the Sale 97, Beaufort Sea area approved on October 3, 1988. The State of Alaska objected to Amoco's coastal zone consistency certification for this plan on March 6, 1989. Amoco appealed the State's decision to the Secretary of Commerce on April 3, 1989. Pending a favorable certification finding by the Secretary of Commerce, Amoco could drill the Galahad Prospect during the 1990 summer open-water season.

- Exxon is conducting geotechnical and preliminary site clearance work on several leases north of Dease Inlet in the Sale 97, Beaufort Sea area. It is anticipated that Exxon will submit an EP this winter and propose to use a bottom-founded structure, either the Concrete Island Drilling System or the Steel-Sided Drilling Caisson, for drilling during the 1990-1991 season.

- ARCO is completing preliminary site clearance on leases in the central western Beaufort Sea and also on leases adjacent to the Stinson well, which will be drilled on State submerged lands off the Arctic National Wildlife Refuge. ARCO has indicated their intentions to submit an EP for Beaufort Sea OCS leases in the near future.

- Chevron is conducting cooperative high resolution common depth point geophysical surveys on leased and unleased lands on several prospects in the Beaufort Sea in support of a potential EP to be submitted this winter.

Atlantic: No exploratory wells have been spudded on the Atlantic OCS since 1984. To date, 46 exploratory wells have been drilled, but no commercial quantities of hydrocarbons were encountered. During FY 1989, however, Mobil Oil Exploration & Producing Southeast Inc., submitted a draft EP for drilling on the Manteo Prospect 47 miles off Cape Hatteras, North Carolina.

Gulf of Mexico: In the Gulf of Mexico OCS Region, exploratory drilling decreased overall by 22 percent as only 458 wells were started compared with 590 last year. However, exploratory drilling in the Gulf of Mexico again showed positive signs of expansion in water depths greater than 600 feet. Several wells of geologic significance were drilled on the Texas-Louisiana slope during FY 1989.

Shell Offshore, Exxon, and Conoco continued to expand drilling activities in the ultradeep waters of the Gulf of Mexico. Shell Offshore drilled Mississippi Canyon Block 522 in 6,929 feet water depth and Green Canyon Block 736 in 4,471 feet water depth. Shell Offshore also holds the world water depth record for drilling an exploratory well in 7,520 feet water depth in Mississippi Canyon Block 657. Several significant hydrocarbon discoveries were reported in deep water, and several leases were qualified for producing hydrocarbons in payable quantities in FY 1989. As of September 30, 1989, there were 10 rigs drilling in water depths greater than 1,000 feet. Additionally, 71 wells were started in water depths of 600 feet or more and 8 oil and gas discoveries were made at these water depths.

In the northeastern Gulf of Mexico, the deep Jurassic Norphlet Formation continued to be an important exploration target. A potentially significant gas discovery in the Norphlet Sandstone was reported from a Chevron well in the Destin Dome Block 56 area, south of Pensacola, Florida.

Freeport McMoRan made a major discovery of sulphur in Main Pass Block 299. This site is about 18 miles east of the birds-foot portion of the Mississippi River Delta and is located in 210 feet of water. A combination of Freeport McMoRan, Felmont Oil Company, and IMC Fertilizer Company bid $3,401,757 for the tract in the February 1988 sulphur and salt lease sale. As of October 1989, some 20 exploration wells have been drilled, and reserves of sulphur in place are estimated at 67 million long tons.

A capital expenditure of some $500 million is anticipated to enable the Main Pass 299 mine to start production. Initial plans are for a minimum of 5 structures, with as many as 7 possible. These structures would include a power plant, crew quarters, production platforms, a bleedwater platform, and possibly a barge-loading platform. The feasibility of a 19-mile pipeline to bring the sulphur ashore is also being studied. Plans were to develop the mine and start initial production by mid-1992; however, the recent discovery by Freeport McMoRan of a sizeable reservoir of oil on top of and in the caprock over the sulphur deposit complicated the plans. Chevron U.S.A. owns the oil and gas rights, and negotiations are presently underway for the production of the oil.

Pacific: Five exploratory wells were spudded in the Pacific OCS Region in FY 1989. At the end of FY 1989, a well was still being drilled on the Smuggler's Cove Unit. Four more wells were drilled with mobile vessels: 1 each in the Gato Canyon Unit and the Dos Cuardras Field, and 2 in the Anacapa Unit.

Development/ Production Activities

Table 6 summarizes offshore development and production on the Federal offshore of the United States during FY 1989. Both activities remain concentrated on the Gulf of Mexico OCS as they have since 1954 and on the Pacific OCS as they have since 1963.

Table 6. *Development/Production on OCS Oil and Gas Leases, FY 1989*

Development/Production Activity	Alaska	Atlantic	Gulf of Mexico	Pacific	FY 1989 Totals
Plans for OCS Development/Production					
Submitted	0	0	235	0	235
Approved	0	0	215	0	215
Disapproved	0	0	0	0	0
Pending	0	0	38	0	38
Development Well Starts	0	0	409	15	424
Production Platforms					
Total in FY 1988	0	0	3,664	21	3,685
Added	0	0	125	1	126
Removed	0	0	83	0	83
Total as of 09/30/89	0	0	3,706	22	3,728
Platform Maximums					
Water depth in feet	N/A	N/A	1,760*	1,198	N/A
Miles from shore	N/A	N/A	129	11	N/A
Pipelines Added	0	0	215	0	215
Pipeline Miles Added	0	0	707	0	707
Total Pipeline Miles	0	0	17,960	164	18,124

NOTE: The maximum depth of the offshore waters in which production platforms are now located is given in feet, and the maximum distance from shore is given in miles. These statistics are not applicable (N/A) to the Alaska or Atlantic OCS Regions since neither currently has production. Pacific OCS Region's platform count does not include the offshore storage and treatment facility. The Gulf of Mexico's total platform count at the end of FY 1988 is a revised figure and is different from that reported in the FY 1988 report.

* Conoco's tension leg well platform, Green Canyon Block 184.

Figure 4 shows development well starts over the past decade and figure 5 shows the number of production platforms on the OCS during the past decade.

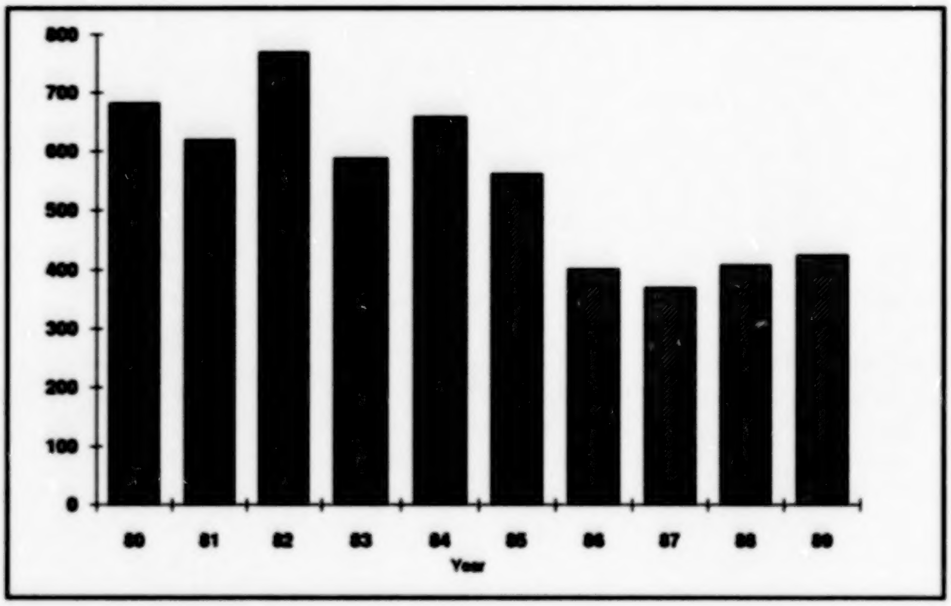


Figure 4. *Development Well starts on the OCS FY 1980-1989*

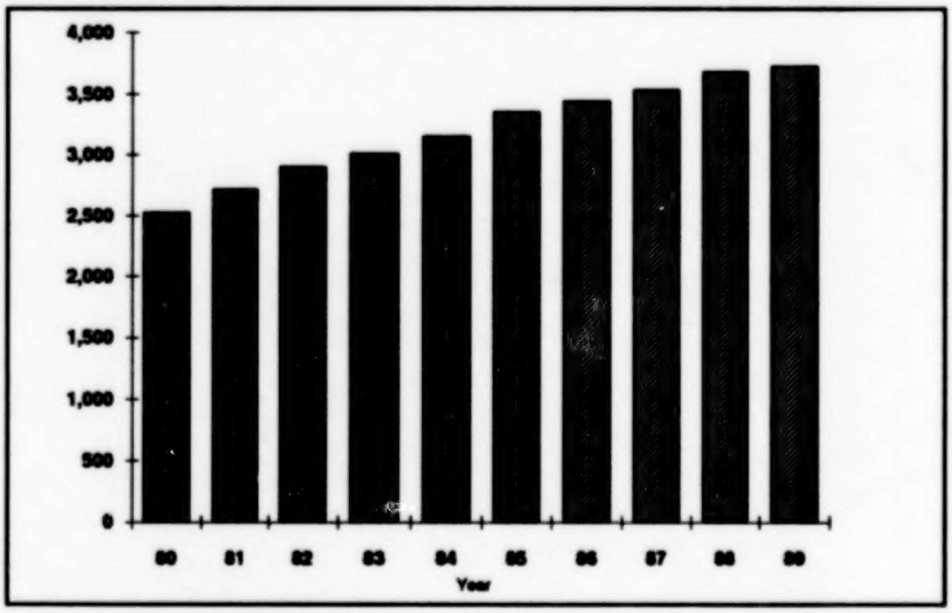


Figure 5. *Production Platforms on OCS Oil and Gas Leases, FY 1980-1989*

Alaska: Although no production currently exists on Federal leases offshore Alaska, an application from Amerada Hess for unitization of 2 Federal leases and five State of Alaska leases for the Seal Island-Northstar discovery in the Beaufort Sea is currrently being processed by the State of Alaska and the MMS.

Pacific: In FY 1989, there were 15 development wells started in the Pacific OCS Region, a significant decrease from the 35 drilled in FY 1988. During FY 1989, the Exxon Platform Harmony jacket was installed in 1,198 feet of water. This is the deepest water in which a platform has been set in the Pacific OCS. Platform Harmony, in the Hondo Field (Santa Ynez Unit), is approximately 7 miles offshore and can accommodate 60 wells.

Gulf of Mexico: In the Gulf of Mexico, 409 development wells were drilled in FY 1989, a slight increase from the 376 drilled in FY 1988.

During FY 1989, Placid Oil Company completed installation of their floating production system (FPS) in Green Canyon Block 29 in 1,540 feet of water depth. The FPS consists of subsea wellheads, a subsea template, a production riser, flow lines/pipelines, a semisubmersible drilling/production facility, mooring system, and a shallow-water central processing production platform. The system is designed to accommodate 24 template-drilled and satellite wells. Four wells have been completed to date and production has begun.

- Conoco, Inc., recently completed installation of the first tension leg well platform in the Gulf of Mexico in Green Canyon Block 184 at a water depth of 1,760 feet. Drilling operations are in progress.

- Shell Offshore Inc., completed installation of the Bullwinkle platform in 1,350 feet of water in Green Canyon Block 65 during the summer of 1988. The 60-slot fixed platform is now the tallest existing offshore structure at an overall height of about 1,615 feet. Simultaneous drilling and producing operations are now in progress.

Reserve Inventory

The MMS, in its administration of the OCS Oil and Gas Leasing Program, is responsible both for monitoring the Nation's offshore reserves of known hydrocarbon deposits and for estimating its potentially recoverable undiscovered resources. These responsibilities include the maintenance of the Reserves Inventory Program established in FY 1977 to estimate the reserves of newly discovered Federal offshore fields and to revise and update those estimates as new geological, engineering, and production data are collected.

Before 1988, "proved" reserves estimated by MMS included quantities of oil or gas known to exist as a result of drilling and that were deemed recoverable by use of current technology under current economic conditions. The MMS also included "unproved" reserves with its estimates, reserves which may be recoverable under future economic/technological conditions. Beginning in 1988, reserve estimates were re-categorized to coincide with the definitions of reserves adopted by the Society of Petroleum Engineers in 1987. Reserve estimates reported for 1988 are from proved fields in the Gulf of Mexico OCS Region and from proved and unproved fields in the Pacific OCS Region. As of January 1, 1989, the Reserves Inventory Program estimated that the submerged Federal lands contained remaining reserves of 4.7 billion barrels of crude oil and 44.4 trillion cubic feet of natural gas. Table 7 compares the 1988 estimates of original and remaining oil and gas reserves in new and developed OCS fields with the 1987 estimate of reserves.

Table 7. *1988 Estimates of Original and Remaining Oil and Gas Reserves in New and Developed OCS Fields, Compared with the 1987 Estimates of Reserves*

	Original Reserves		Cumulative Production		Remaining Reserves		No. of Fields Studied
	Oil in Bbbl	Gas in Tcf	Oil in Bbbl	Gas in Tcf	Oil in Bbbl	Gas in Tcf	
Pacific (Southern California) OCS							
1988	1.73	2.47	0.43	0.43	1.30	2.04	24
1987	1.73	2.50	0.40	0.38	1.33	2.12	24
Gulf of Mexico OCS*							
1988	10.95	126.70	7.56	84.31	3.39	42.40	678
1987	10.76	122.10	7.26	79.70	3.50	42.40	704

NOTE: All estimates are calculated for each year as of December 31; crude oil is given in billions of barrels (Bbbl) at 60 degrees Fahrenheit, 14.696 psia (pounds per square inch area)(14.73 psia in the Pacific OCS); and natural gas in trillions of cubic (Tcf) at 60 degrees Fahrenheit, 15.025 psia (14.73 psia in the Pacific OCS).

* For the Gulf of Mexico OCS in 1988 only "proved" reserves are reported in accordance with reserves definitions adopted by the Society of Petroleum Engineers in 1987.

Source: OCS Report MMS 89-0085 for the Pacific and OCS Report MMS 89-0074 for the Gulf of Mexico.

In Table 8, reserves are estimated in the respective MMS regions using geologic, geophysical, and engineering data supplied by exploration companies and lease operators. These estimates are inventoried by field and by reservoir. An important tool of the Reserves Inventory Program is the Field and Reservoir Reserves Estimates (FRRE) system. The FRRE system is a computerized storage and retrieval system used to assimilate new or updated reserve estimates into the inventory. It is a part of the Outer Continental Shelf Information System (OCSIS), which stores and uses information for reserve estimates.

Table 8–Estimates of Undiscovered Economically Recoverable Oil and Gas Resources in 22 Planning Areas of 4 OCS Regions, as of January 1,1987

OCS Region/ Planning Area	Marginal Prob.*	Conditional Mean		Risked Mean		Risked (BBOE)
		Oil (Bbbl)	Gas (Tcf)	Oil (Bbbl)	Gas (Tcf)	
ALASKA OCS REGION						
Gulf of Alaska**						
Leased and unleased	0.04	0.98	0.00	0.04	0.00	0.04
Unleased	0.04	0.98	0.00	0.04	0.00	0.04
Cook Inlet**						
Leased and unleased	<0.01	0.17	0.00	neg.	0.00	neg.
Unleased	<0.01	0.17	0.00	neg.	0.00	neg.
Kodiak**						
Leased and unleased	0.03	0.43	0.00	0.01	0.00	0.01
Unleased	0.03	0.43	0.00	0.01	0.00	0.01
N. Aleutian**						
Leased and unleased	0.02	0.61	0.00	0.01	0.00	0.01
Unleased	0.02	0.61	0.00	0.01	0.00	0.01
Shumagin**						
Leased and unleased	0.01	0.28	0.00	neg.	0.00	neg.
Unleased	0.01	0.28	0.00	neg.	0.00	neg.
St. George Basin						
Leased and unleased	0.02	0.39	0.00	0.01	0.00	0.01
Unleased	0.02	0.38	0.00	0.01	0.00	0.01
Leased	0.01	0.11	0.00	neg.	0.00	neg.
Navarin Basin						
Leased and unleased	0.03	1.14	0.00	0.03	0.00	0.03
Unleased	0.03	0.90	0.00	0.03	0.00	0.03
Leased	0.03	0.33	0.00	0.01	0.00	0.01
Norton Basin						
Leased and unleased	<0.01	0.58	0.00	neg.	0.00	neg
Unleased	<0.01	0.17	0.00	neg.	0.00	neg.
Leased	<0.01	0.51	0.00	neg.	0.00	neg.
Hope Basin**						
Leased and unleased	0.01	0.66	0.00	neg.	0.00	neg.
Unleased	0.01	0.66	0.00	neg.	0.00	neg.
Chukchi Sea**						
Leased and unleased	0.22	2.73	0.00	0.59	0.00	0.59
Unleased	0.22	2.73	0.00	0.59	0.00	0.59
Beaufort Sea						
Leased and unleased	0.14	1.44	0.00	0.21	0.00	0.21
Unleased	0.14	0.87	0.00	0.12	0.00	0.12
Leased	0.12	0.79	0.00	0.09	0.00	0.09
ATLANTIC OCS REGION						
North Atlantic**						
Leased and unleased	0.39	0.11	2.54	0.04	1.00	0.22
Unleased	0.39	0.11	2.54	0.04	1.00	0.22
Mid-Atlantic						
Leased and unleased	0.44	0.22	5.35	0.10	2.36	0.52
Unleased	0.44	0.17	4.40	0.08	1.95	0.43
Leased	0.32	0.08	1.61	0.03	0.51	0.12
South Atlantic						
Leased and unleased	0.23	0.21	4.60	0.05	1.06	0.24
Unleased	0.23	0.20	4.39	0.05	1.01	0.23
Leased	0.09	0.01	0.26	neg.	0.02	neg.
Straits of Florida**						
Leased and unleased	0.19	0.34	0.57	0.06	0.11	0.06
Unleased	0.19	0.34	0.57	0.06	0.11	0.06

Table 8. Estimates of Undiscovered Economically Recoverable Oil and Gas Resources in 22 Planning Areas of 4 OCS Regions, as of January 1,1987 (continued)

OCS Region/ Planning Area	Marginal Prob.*	Conditional Mean		Risked Mean		Risked (BBOE)
		Oil (Bbbl)	Gas (Tcf)	Oil (Bbbl)	Gas (Tcf)	
GULF OF MEXICO OCS REGION						
Eastern Gulf**						
Leased and unleased	1.00	0.95	1.68	0.95	1.68	1.25
Unleased	1.00	0.80	1.11	0.80	1.11	1.00
Leased	1.00	0.15	0.56	0.15	0.56	0.25
Central Gulf						
Leased and unleased	1.00	3.82	37.66	3.82	37.66	10.52
Unleased	1.00	2.76	25.95	2.76	25.95	7.38
Leased	1.00	1.04	11.76	1.04	11.76	3.13
Western Gulf						
Leased and unleased	1.00	1.58	25.40	1.58	25.40	6.10
Unleased	1.00	1.42	21.22	1.42	21.22	5.20
Leased	0.99	0.15	4.22	0.15	4.20	0.90
PACIFIC OCS REGION						
Oregon-Washington***						
Leased and unleased	0.25	0.19	1.97	0.05	0.49	0.14
Unleased	0.25	0.19	1.97	0.05	0.49	0.14
Northern California***						
Leased and unleased	0.60	0.57	1.69	0.34	1.01	0.52
Unleased	0.60	0.57	1.69	0.34	1.01	0.52
Central California***						
Leased and unleased	0.90	0.50	0.82	0.45	0.74	0.58
Unleased	0.90	0.50	0.82	0.45	0.74	0.58
Southern California						
Leased and unleased	1.00	1.31	3.01	1.31	3.01	1.84
Unleased	1.00	0.97	2.21	0.97	2.21	1.36
Leased	1.00	0.32	0.86	0.32	0.86	0.47

* Marginal probability of hydrocarbons expresses the chance that commercial hydrocarbons exist in at least one prospect in the area.

**Estimates for Eastern Gulf of Mexico were revised in July 1989.

*** No OCS lands under lease as of January 1, 1987.

Note: Estimates by the MMS as of January 1, 1987: oil in billions of barrels (Bbbl), gas in trillions of cubic feet (Tcf), risked mean total in billions of barrels of oil equivalent (BBOE). Negligible (neg.) quantities are given when reliable data indicate little or no concentration of usable, producible hydrocarbons, on the average, under current economic conditions and using current technology.

The Reserves Inventory Program provides essential data and assistance to other programs within MMS. In addition to maintaining and publishing reserve inventories, the MMS relies on the offshore mapping field and reservoir analysis by this program as support for its supervision of field and reservoir development. This supervision includes decisions on unitization of tracts, drilling permits, production rate control, geological and engineering analysis for future lease sale bid evaluations.

Conventional Undiscovered Economically Recoverable Resources

Table 8 summarizes the quantities of conventional undiscovered economically recoverable oil and gas that may exist in offshore areas under Federal jurisdiction. The MMS and the U.S. Geological Survey (USGS) have jointly assessed the undiscovered, conventionally recoverable oil and natural gas resources of the United States using data available as of January 1, 1987. Estimates of the Nation's undiscovered oil and gas resources both onshore and offshore are necessary for national energy planning and for land-use decisions. The last national assessment was completed by the USGS in 1980. The MMS, however, completed a revised Federal offshore assessment in 1984 and published the results in 1985 (OCS Report MMS 85-0012). These estimates were the basis for developing the current 5-year leasing program.

Since the 1980 assessment, considerable geologic and geophysical information has been collected through exploration activities in all areas of the United States. Considerable changes in the economic conditions, conventional recovery technologies, and other pertinent factors associated with the oil and natural gas industry have also influenced estimates. In addition, large amounts of oil and gas have been discovered since 1980, transferring volumes from the undiscovered resource category into the proven reserves category. Finally, the resource assessment methodologies used by both agencies have been significantly improved. One improvement is the adoption by MMS of a 1986 recommendation by the National Academy of Sciences. The recommendation involved developing a methodology to estimate accumulations of oil and natural gas not currently economically recoverable under existing economic and reasonably projected conditions, yet perhaps significant in the future.

Table 8 also lists the undiscovered resource estimates for 22 of the 26 planning areas of the OCS regions (see figure 2). Four planning areas (Aleutian Arc, Aleutian Basin, Bowers Basin, and St. Matthew-Hall) are considered to contain negligible quantities of economically recoverable hydrocarbons and are not listed in the table. Although the table shows estimates of the average quantities of undiscovered, economically recoverable oil and gas resources, the estimates are actually developed as ranges of possible values with associated probabilities of occurrence. These estimates, which were derived from data available as of January 1, 1987, update earlier ones published in OCS Report MMS 85-0012.

As before, the MMS calculated OCS resources with its computer-based mathematical model called Probabilistic Resource Estimates Offshore (PRESTO). In this model, the MMS evaluators use a prospect-specific database developed from regional interpretations of seismic, geologic, engineering, and economic information. PRESTO provides a range of resource estimates with a corresponding estimate of the probability of occurrence. This method differs from those methods formerly used for similar assessments by the USGS, as described in USGS Circulars 725 and 860.

In table 8, the marginal probability of hydrocarbons, expressed as a decimal fraction, quantifies the chance that commercial hydrocarbon volumes exist in a planning area. In the case that hydrocarbons are estimated to exist with certainty in at least one accumulation in the area, the marginal probability is expressed as 1.00. However, commercial accumulations of hydrocarbons are not known to exist in the majority of these planning areas. Thus, the risked mean estimates incorporate the chance that economic hydrocarbons may not exist in the area. The risked mean total resource estimates are also presented in the form of billions of barrels of oil equivalent (BBOE). This conversion is sometimes useful when making comparisons between areas.

Production Activities

Commercial oil and gas production continued to be limited to Federal leases on the Gulf of Mexico and the Pacific OCS. In FY 1989, production from these OCS fields represented 10.2 percent of total U.S. oil production and 24.2 percent of total U.S. gas production. As in the previous fiscal year, there was no production from either the Alaska or Atlantic OCS Regions. Table 9 lists the oil and gas volumes from the 7,249 producing wells on the OCS.

Table 9. *Oil and Gas Production from Wells on Offshore Federal Leases, FY 1989*

Production	Alaska	Atlantic	Gulf of Mexico	Pacific	FY 1989 Totals
Crude Oil (Mbbl)	0	0	238,622	34,334	**272,956**
Condensate (Mbbl)	0	0	41,851	0	**41,851**
Natural Gas (MMcf)	0	0	4,194,332	32,740	**4,227,072**
Producing Wells:					
Oil Wells	0	0	3,550	385	**3,935**
Gas Wells	0	0	3,300	14	**3,314**

NOTE: Crude oil and condensate are reported in thousands of barrels (Mbbl) and natural gas (gas-well gas and well or casinghead gas) in millions of cubic feet (MMcf).

The royalty revenues from this reported offshore production may be found under "Receipts: Accounts 142020 and 14X6707" on p. 53.

OCS figures over the past 10 years for natural gas, crude oil, and condensate productoin are depicted in figures 6-8.

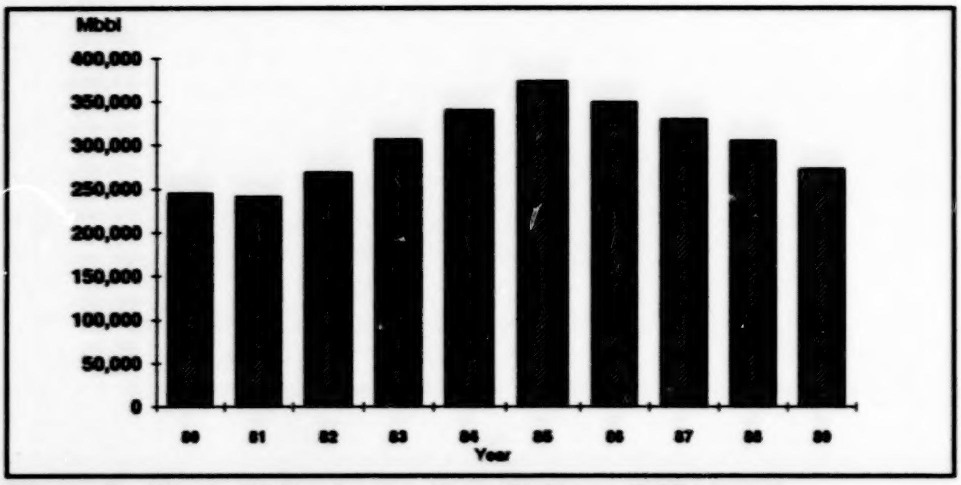


Figure 6. *Crude Oil Production from Wells on OCS Leases, FY 1980-1989*

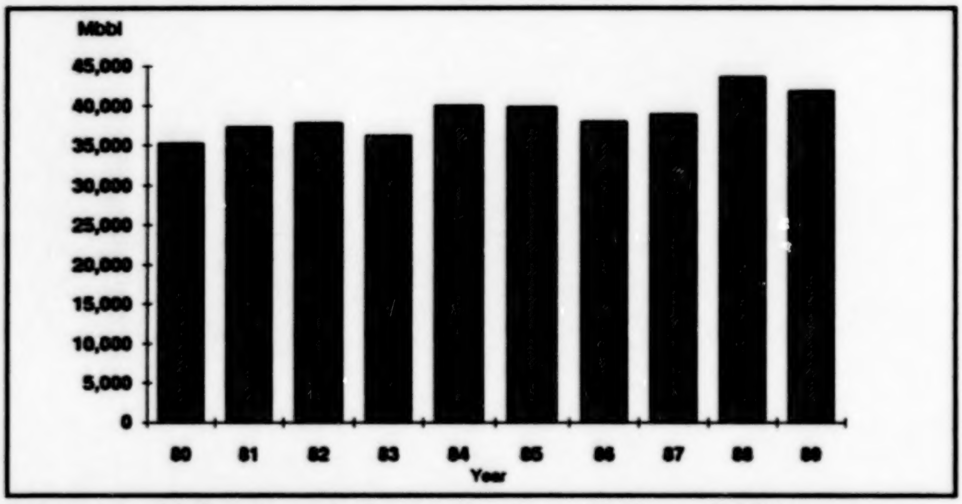


Figure 7. *Oil Condensate Production from Wells on OCS Leases, FY 1980-1989*

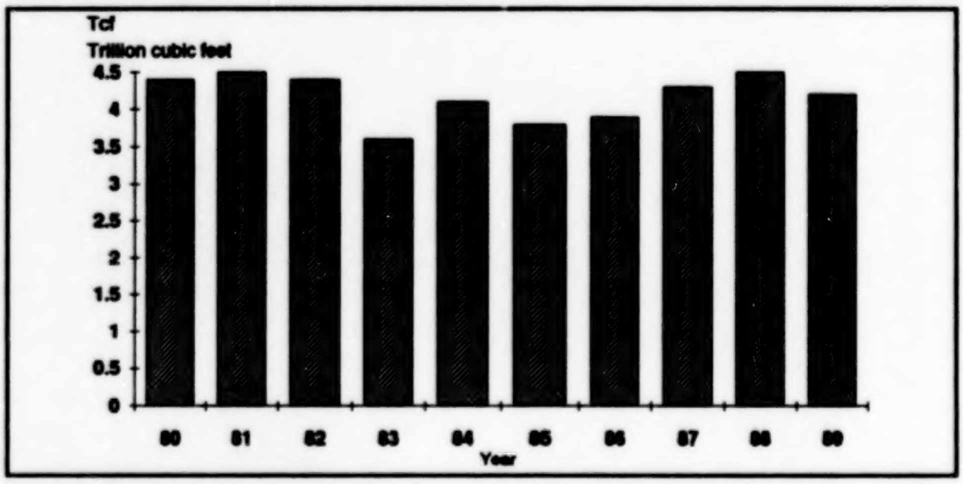


Figure 8. *Natural Gas Production from Wells on OCS Leases, FY 1980-1989*

Overall, offshore production of crude oil and condensate decreased by 9.7 percent from that reported in FY 1988, and offshore production of natural gas, including gas-well gas and casinghead gas, decreased by 7.2 percent. Oil and condensate production decreased by 10.4 percent in the Gulf of Mexico OCS Region and decreased by 3.1 percent in the Pacific Region. Natural gas production decreased by 7.1 percent in the Gulf of Mexico OCS Region and decreased by 12.2 percent in the Pacific OCS Region.

As of September 30, 1989, the 7,249 producing wells on Federal leases included the Gulf of Mexico OCS Region's 3,550 oil wells and 3,300 gas wells and the Pacific OCS Region's 385 oil wells and 14 gas wells. At the end of FY 1989, the Gulf of Mexico had 29 fewer producing oil wells and 165 more producing gas wells than at the end of FY 1988. For the same period, the Pacific had 23 more oil wells and 10 fewer gas wells. Figure 9 shows the number of producing oil and gas wells on OCS leases over the past 10 fiscal years.

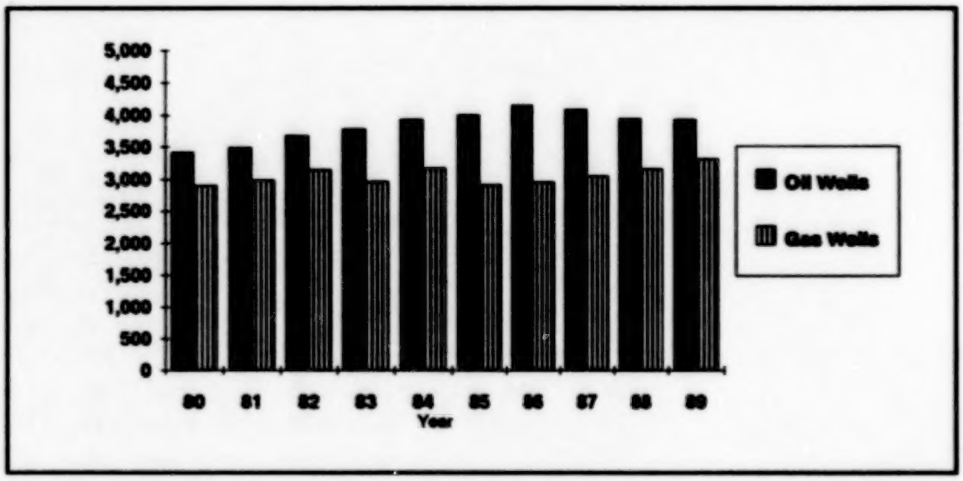


Figure 9. *Producing Oil and Gas Wells on OCS Leases, FY 1980-1989*

Litigation Affecting OCS Leasing

People of the Village of Gambell v. *Hodel*, Cir. No. A85-184 (Gambell II) (aboriginal rights in the Norton Basin litigation)

This litigation has been ongoing since April 1985. The latest event was that the ninth circuit ruled in the plaintiffs' favor that the law does recognize aboriginal claims in the high seas and Outer Continental Shelf (OCS). The ruling rejected the Department of the Interior's arguments that the Alaska Native Claims Settlement Act (ANCSA) extinguished aboriginal claims, if any, in the OCS.

It is unclear what kind of aboriginal rights the court has said the law will recognize in the submerged lands of and waters above the OCS. Through its power to fashion Federal common laws, the court appears to have extended the traditional concept of aboriginal rights of exclusive use and occupancy to the waters of the Norton Sound off Alaska. This ruling would be extremely disruptive to Department of the Interior programs in the OCS off Alaska. It is possible, however, that the court intended to recognize aboriginal rights of Native Alaskans that are unexclusive and protected only against significant interference.

The Department of the Interior sought a reconsideration by the ninth circuit to clarify its opinion, but the motion for rehearing was denied on July 18, 1989. The case was remanded to the district court for a determination of the factual issues of whether the villages in fact possess aboriginal subsistence rights in the OCS.

Village of Akutan v. *Hodel*, No. 88-3610 (9th Cir., Oct. 5, 1988)

On October 5, 1988, the ninth circuit upheld the Secretary on the merits of his decision to hold Sale 92 in the North Aleutian Basin off Alaska. It rejected the State's claim under section 19 of the OCS Lands Act that the Secretary had improperly rejected the Governor's recommendation to delay the sale for 8 years. The court also rejected the claim of the Natural Resources Defense Council that the Secretary's EIS was premised on an irrational oil-spill risk model. Finally, the court found that the Secretary had rationally rejected the recommendation of the National Marine Fisheries Service (NMFS), presented as a "reasonable and prudent alternative" to the full lease sale under the Endangered Species Act, to delete all tracts within 25 miles of the Alaska Peninsula.

The lease sale was held on October 11, 1988. Twenty-three leases were awarded for bonuses of over $95 million. On October 26, 1988, the plaintiffs filed a motion to reconsider. On March 9, 1989 the ninth circuit issued an amended opinion still in favor of the Federal Government and an order denying the plaintiffs' petition. On June 7, 1989, the State of Alaska filed a motion for certiorari with the Supreme Court. The Federal Government's answer was filed in August 1989. On October 2, 1989, the U.S. Supreme Court denied the petitions to review the case. Still at issue in the case are the aboriginal subsistence rights. The case is pending resolution of the Norton Basin aboriginal rights issue in Gambell.

Foundation on Economic Trends, et al., v. *Watkins, et al.*, Civ. No. CV 89-1483 GHR (D.D.C.) (Global warming litigation)

On May 23, 1989, the Foundation on Economic Trends, the Greenhouse Crisis Foundation, and Jeremy Rifkin filed suit against the Departments of Interior, Agriculture, and Energy. The plaintiffs seek to enjoin these Federal departments from authorizing, approving or funding any programs that "contribute to the 'greenhouse effect'" until the defendants discuss and evaluate in their environmental analyses the impacts of their programs on the greenhouse effect.

The defendants have filed a motion to dismiss, based upon the plaintiffs' failure to present a justiciable case or controversy. The plaintiffs did not identify any specific National Environmental Protection Act (NEPA) document or decision as the subject of their challenge. The motion was denied on February 12, 1990. The parties are currently conducting discovery.

Natural Resources Defense Council, et al. v. *Hodel, et al.*, (D.C. Circuit) (5-Year OCS Oil and Gas Leasing Program litigation)

On December 30, 1988, the D.C. Circuit Court of Appeals issued its decision in this case challenging the 5-Year OCS Oil and Gas Leasing Program. Considering 10 issues raised under the NEPA, the OCSLA, and section 111 of P. L. 99-591, of the Department of the Interior's appropriation bill, the court denied the petitioner's request for injunctive relief thus refusing to enjoin any sales on the 5-year leasing schedule. The court held that the final EIS inadequately analyzed the cumulative impact of the program on the migratory species, particularly salmon and gray whales, and remanded that issue to the Secretary for further consideration. On all other issues raised, the court upheld the Department's program. The MMS published a draft supplemental EIS on cumulative impacts on migratory species in the Pacific and Alaska regions in August, 1989.

Regulations, Enforcement, and Safety

Regulations

Work continued on the revision, clarification, and consolidation of the complex rules and regulations governing OCS oil, gas, and sulphur leasing operations. During FY 1989, 7 rules were promulgated as final rules. Work began or continues on many more rules. A summary of this rulemaking activity follows.

Final Rules

- 30 CFR Part 206 and 43 CFR Part 3590: A final rule by the Bureau of Land Management and the MMS was published in the *Federal Register* on October 7, 1988 (53 FR 39459), with an effective date of November 7, 1988. The final rule amends the provisions of 43 CFR Part 3590 concerning solid minerals exploration and mining operations to streamline and clarify the existing regulations. The final rule also eliminates duplication of regulations currently under the authority of MMS and transfers a section dealing with product valuation to the title of the *Code of Federal Regulations* containing MMS regulations.

- 30 CFR Part 218: A final rule was published in the *Federal Register* on October 26, 1988 (53 FR 43200), with an effective date of October 26, 1988. The final rule amends the regulations of 30 CFR Part 218 to reflect a change in references to the electronic communications system used by the U.S. Department of the Treasury (Treasury) to process electronic funds transfers. The Treasury Financial Communication System (TFCS) was replaced by the Treasury with the Financial Management Service Fedwire Deposit System (FDS). This final rule amendment replaces the references to the TFCS with references to the new FDS.

- 30 CFR Part 206: A final rule was published in the *Federal Register* on November 8, 1988 (53 FR 45082), with the effective date of changes as follows: changes to 30 CFR Part 206 effective March 1, 1988; changes to NTL-1 effective January 25, 1977; and changes to NTL-1A effective April 5, 1977. The final rule amends the definition of "gross proceeds" in recently adopted regulations governing the valuation for royalty purposes of oil and gas production from Federal and Indian leases (including leases on the OCS). The revised definition is the result of an adverse court decision. As amended, so-called "take-or-pay payments" no longer would be part of a lessee's gross proceeds. The MMS also is deleting the references to payments for advanced exploration or development costs and prepaid reserve payments in the "gross proceeds" definition. The final rule also amends the Notice to Lessees and Operators of Federal Onshore Oil and Gas Leases Number 1 (NTL-1) and Notice to Lessees and Operators of Indian Oil and Gas Leases Number 1A (NTL-1A) to remove the requirement to pay royalties on take-or-pay payments. These notices to lessees and operators were effective from January 25, 1977, and April 5, 1977, respectively, to March 1, 1988

- 30 CFR Part 206: A correction to a final rule was published in the *Federal Register* on November 14, 1988 (53 FR 45760), with an effective date of November 14, 1988. The correction amends the final revised oil and gas product valuation regulations that were published in the *Federal Register* on January 15, 1988 (53 FR 1184 and 53 FR 1230). After adoption of the final regulations in January 1988, the wording of several provisions was discovered to be inconsistent with MMS's intent, as discussed in the preamble to the final rules. Consequently, MMS corrected the language of those provisions to be consistent with the original intent.

- 30 CFR Parts 202, 203, 206, 210, and 212 and 43 CFR Part 3480: A final rule was published in the *Federal Register* on January 13, 1989 (54 FR 1492), with an effective date of March 1, 1989. The rule provides for the amendment and clarification of regulations governing the valuation of coal for royalty purposes. The amended and clarified regulations govern the methods by which product value is determined when computing coal royalties under Federal coal leases and Indian (tribal and allotted) coal leases (except leases on the Osage Indian Reservation, Osage County, Oklahoma). A public meeting held May 4, 1989 in Denver solicited public comments on coal regulations in effect since March 1, 1989 for study by the Department of the Interior for modification or change. The period for written comments extended to June 5, 1989. The revised regulations will result in consistent and uniform guidance to industry relative to the valuation of produced coal for royalty computation purposes.

- 30 CFR Parts 256 and 281: A final rule was published in the *Federal Register* on January 18, 1989 (54 FR 2042), with an effective date of February 17, 1989. The final rule establishes regulations for the leasing of minerals other than oil, gas, and sulphur in the OCS. The rule specifies leasing procedures and basic lease conditions and is intended to ensure that adjacent States and the public have an early opportunity for effective participation in the leasing process. The rule is the second in a series of three rules designed to establish a comprehensive leasing and regulatory program for OCS minerals other than oil, gas, and sulphur. The series of rules recognizes the special circumstances, issues, and requirements associated with those OCS minerals. It establishes practices and procedures for wise management of OCS resources, permitting balanced orderly leasing of minerals other than oil, gas, and sulphur while protecting the human, marine, and coastal environments; preserving and maintaining free enterprise competition; and minimizing or eliminating conflicts between OCS mineral activities and other uses of the OCS.

- 30 CFR Part 282: A final rule was published in the *Federal Register* on January 18, 1989 (54 FR 2058), with an effective date of February 17, 1989. The final rule establishes a separate set of general regulations designed to govern postlease discovery, delineation, development, and production of minerals other than oil, gas, and sulphur on the OCS. The rule recognizes the special circumstances, issues, and requirements associated with those OCS minerals. The rule is the third and final in a series designed to implement a comprehensive prelease prospecting, leasing, and postlease operations regulatory program for OCS nonenergy minerals.

Proposed Rules

- 30 CFR Part 206: A proposed rule published in the *Federal Register* December 15, 1988 (53 FR 50422), would amend the gas product valuation regulations to change the method of determining the value of gas sold under percentage-of-proceeds contracts. Since adoption of the final regulations, the MMS has determined that little or no additional royalties are collected as a result of this provision. Also, the MMS has experienced a significant increase in workload that is unnecessary for the valuation of gas sold under these contracts. Consequently, the MMS is soliciting comments on a proposed alternative method that reduces lessee reporting requirements, produces the same revenue payments, and eliminates the unnecessary workload burden on MMS.

- 30 CFR Parts 202, 206, 210, and 212: A proposed rule published in the *Federal Register* January 5, 1989 (53 FR 354), would amend and clarify existing regulations to define the value, for royalty purposes, of geothermal resources produced from Federal lands administered by the Department of the Interior and the Department of Agriculture. Geothermal resources on Indian (tribal and allotted) lands are excluded from this proposed rulemaking. Existing regulations provide only general guidance for the valuation of geothermal production. The amended rule will provide industry and the public with a comprehensive and consistent geothermal valuation policy and standards for valuing produced geothermal resources and geothermal byproducts.

- 30 CFR Part 250: A proposed rule published in the *Federal Register* January 17, 1989 (54 FR 1846) would establish special emission control requirements for OCS facilities off the coast of California under the provisions of section 5(a)(8) of the OCSLA, as amended. The application of the provisions of proposed section 250.47 to OCS facilities off the coast of California would supersede the requirements found in 30 CFR 250.45 and 250.46. The requirements in sections 250.45 and 250.46 would continue to apply to OCS facilities off the coast of States other than California. This action addresses air quality problems unique to California. The objective of the proposed rule is to prevent or mitigate any significant adverse impact on onshore air quality as a result of oil and gas operations conducted on Federal leases in the OCS off the coast of California. The comment period for this proposed rule was subsequently extended from February 16 to May 31, 1989.

- 30 CFR Part 250: A proposed rule published in the *Federal Register* March 23, 1989 (54 FR 11965), would govern the release of proprietary geological and geophysical data and information from oil and gas and sulphur leases in the OCS and provide discretion to the Director of MMS to release proprietary data under certain circumstances that are identified in the rule. This proposed rule better defines the conditions under which data or information may be made available to a limited group and identifies the persons to whom the data or information may be made available. The notice also proposes to eliminate the discretionary authority to release data or information for Government scientific or research purposes.

- 30 CFR Part 218: A proposed rule published in the *Federal Register* April 11, 1989 (54 FR 14364) would amend MMS regulations at 30 CFR 218.54, 218.55, and 218.103 governing the rate of interest charged on underpayments or late payments of oil and gas royalties, rentals, bonuses, and other monies due the Federal Government by lessees and other royalty payors, and the rate of interest paid on late disbursement of an Indian tribe's or allottee's royalty or a State's share of royalty revenues. The existing oil and gas regulations reference section 6621 of the Internal Revenue Code of 1954 for the applicable interest rate. Section 6621 was, however, amended by the 1986 Tax Reform Act and presently references two different interest rates, one rate for overpayments and another for underpayments. This proposed rulemaking will clarify the ambiguity in the existing regulations created by the amendment to section 6621 as to which of the two different rates would apply.The rate of interest charged on underpayment or late payment of monies due on solid mineral or geothermal resource leases is not affected by this proposed rulemaking.

- 30 CFR Part 250: A proposed rule published in the *Federal Register* August 1, 1989 (54 FR 31768), would revise the final rule that was published April 1, 1988 (53 FR 10596). Training requirements under consideration in the April 1, 1988, rule differed significantly from those published as a proposed rule that they could not be published as part of the final rule. Accordingly, MMS published the April 1, 1988, document without substantially revising requirements governing the training of personnel engaged in oil and gas and sulphur operations in the OCS. The August 1, 1989, proposed rule would revise the minimum training requirements for personnel engaged in drilling and production operations in the OCS and establish new minimum training requirements for personnel engaged in well-completion and workover operations in the OCS.

- 30 CFR Part 250: A proposed rule was published in the *Federal Register* August 4, 1989 (54 FR 32316). The MMS regulations governing oil, gas, and sulphur operations in the OCS include provisions for making data and information available to the public. The proposed rule would clarify existing rules to assure that the items of data and information submitted on forms MMS-1866, Request for Reservoir Maximum Efficient Rate; MMS-1867, Request for Well Maximum Production Rate; MMS-1868, Well Potential Test Report; MMS-1869, Quarterly Oil Well Test Report; and MMS-1870, Semiannual Gas Well Test Report that will be made available for public inspection are clearly identified in the regulations. This notice proposes to amend 30 CFR 250.18 to clarify which data and information submitted in association with the regulation of drilling and production operations in the OCS will be available to the public.

- 30 CFR Part 250: A proposed rule published in the *Federal Register* August 31, 1989, amends rules governing oil, gas, and sulphur operations in the OCS to address sulphur exploration, development, and production operations more specifically. Sulphur operations are currently addressed through rules applicable to oil, gas, and sulphur and through OCS Order

No. 10, Sulphur Drilling Procedures, issued by the Gulf of Mexico OCS Region. The proposed rule applies to all OCS regions and creates a new Subpart P entitled "Sulphur Operations."

Note: The Offshore Program issued a compilation of *OCS Regulations: Related to Mineral Resource Activities on the Outer Continental Shelf* in FY 1989, MMS-88-0026. Copies of this reference work may be obtained without charge, from the Office of Offshore Information and Publications, MS 642, 381 Elden St., Herndon, VA 22070-4817, telephone number ((703) 787-1080).

Well-Control Schools

Begun in FY 1979, the MMS well-control training program is designed to ensure that OCS drilling crews know how to prevent and control blowouts. The MMS training approval process includes the review of all training program documents submitted and the initial onsite evaluation of industry-run training schools to verify that the actual training program is being implemented as approved. After initial approval, the MMS makes unannounced visits to assure continued compliance with the MMS training standards. During FY 1989, the MMS conducted unannounced evaluations of 19 well-control schools.

The MMS also conducted onsite evaluation of 15 certified drilling well-control training programs in FY 1989. By year end, 49 basic, 49 refresher, and 63 rotary helper/derrickman courses were operating for a total of 161 certified well-control schools.

On August 1, 1988, the MMS published a *Federal Register* notice regarding lessee training requirements. The proposed rule sets forth the training requirements for drilling well-control, completion and workover well-control, well-servicing, and production operations.

Inspection and Enforcement

During FY 1989, the MMS continued documenting offshore inspection policies and procedures that began with the signing (and issuance) of the Offshore Inspection Program Manual Chapter on May 8, 1983. Current documentation includes the Offshore Inspection Program Handbook, Headquarters and Field Office Supplements, Regional Supervisor Instructions, and District Instructions. Also, the consolidation of three levels of regional documentation into one regional supplement per OCS region continued.

The Offshore Inspection System (OIS) is a computerized database of all inspections performed by MMS. The drilling and production subsystems became fully operational in 1986, and the Phase II update was completed in 1988. Additional subsystems will be added when needed. During FY 1989, the MMS updated the database with 10,760 inspections of drilling, production, workover, completion, abandonment, pipeline, and measurement operations: 195 in the Alaska OCS Region; 7,677 in the Gulf of Mexico OCS Region; and 1,375 in the Pacific OCS Region.

As of September 30, 1989, there were 3,706 production platforms and 183 drilling, workover, and completion rigs operating in the Gulf of Mexico. The number of production platforms in the Gulf of Mexico increased at an annual growth rate of approximately 1.4 percent during FY 1989. A total of 52 petroleum engineering technicians are engaged in the on-site inspection of these facilities each day using 10 contract helicopters for transportation to and from offshore locations. All facilities are inspected annually with more frequent inspections conducted as permitted by staffing and transportation resources.

The 7,677 inspections of drilling, production, workover, completion, abandonment, and pipeline operations in the Gulf of Mexico during FY 1989 resulted in the issuance of 5,002 violation citations (Incidents of Noncompliance). The minimum number of items inspected were 383,000 and over 98.7 percent were in compliance. The number of facility inspections decreased by 1,249, and the number of Incidents of Noncompliance issued increased by 1,480, in comparison to FY 1988. (For further information, contact the MMS Gulf of Mexico OCS Region, Office of Offshore Inspection and Enforcement, (504) 738-2589.)

Equipment Certification

In January 1980, the MMS established current equipment certification requirements when it issued the revised OCS Orders. During FY 1989, the Committee on Safety and Pollution Prevention Equipment of the American Society of Mechanical Engineers (ASME) continued participating in the industrywide certification program as did the ASME Subcommittee on Standards, a joining of the former Subcommittee on Quality Assurance and the Subcommittee on Reference Standards. Throughout FY 1989, the MMS continued to work closely with both ASME groups to revise and update existing standards and to develop new standards as needed. The MMS continues to evaluate the equipment certification program of the American Petroleum Institute (API) for inclusion in the regulations.

Platform Verification

Since FY 1980, the MMS has monitored offshore structures through its Platform Verification Program (PVP), which is directed by the MMS Office of Structural and Technical Support. Through the PVP, the MMS provides guidelines that help assure that fixed and bottom-founded oil and gas platforms and other structures on Federal OCS leases have a high probability of surviving the extreme environmental conditions to which they are exposed. Accordingly, for verification, the PVP requires that the design, fabrication, installation or major modification of all platforms and other structures be reviewed and evaluated by lessee-nominated independent technical organizations certified by MMS. These third parties are known as Certified Verification Agents.

The OCS platforms subject to review under the PVP include those used in frontier areas where severe weather or extreme environmental conditions prevail and those that incorporate unusual or innovative design features. Sixteen structures were under review in FY 1989. Eight of these were projects that originated in FY 1989: an ice island constructed in the Alaska OCS, as well as six template-type structures and Conoco's Tension Leg Well Platform, which are destined for the Gulf of Mexico OCS.

The PVP staff continued their review of Exxon Oil Company's Harmony and Heritage platforms in the Santa Ynez Unit in the Pacific OCS Region. The jacket section of Platform Harmony was installed during FY 1989. The PVP staff also served on an API task group responsible for developing guidelines for the relocation and reuse of existing platforms. Eighty-eight offshore structures have been reviewed by the PVP since 1980.

Technology Assessment and Research

The Technology Assessment and Research (TA&R) program is an integral part of the inspection and enforcement mission of MMS offshore operations. It provides a formal technology base for regulatory personnel who work with the oil and gas industry operating in the frontier areas of the deeper oceans and the ice-infested waters of the Arctic. The TA&R program assesses and analyzes the status of available technologies and, through these studies, promotes engineering dialogues among industry, universities, and MMS personnel. For management purposes, the study areas are grouped under the categories of well control (blowout prevention), verification of offshore structures and pipelines, and technologies to prevent pollution of the environment from offshore operations. The TA&R program findings are used in MMS operations as operational permits and plan approvals, safety and pollution inspections, enforcement actions, accident investigations, and well-control training requirements. Priorities for technology analysis are drawn from the Department of the Interior's 5-year oil and gas leasing program and on the inferences drawn from industry planning and research. In this way, the TA&R program can achieve maximum effectiveness by providing analyses in a timely manner so that new OCS technologies can be satisfactorily understood and applied to improve safety and prevent pollution.

Past TA&R projects include investigations of (1) improved blowout-prevention procedures for deep-water drilling and improved diverter systems for use when shallow-gas blowouts occur before blowout preventers are installed, (2) inspection problems associated with the structural features of tensioned piles and tendons (legs) of tension leg platforms (e.g., forces of pack ice that build up against platforms in the Beaufort Sea), (3) exhaust gas mitigation techniques for offshore platform power generation, (4) oil-spill mitigation techniques, and (5) quantification of subsea earthquake forces on structures and pipelines. The program currently administers about 35 active projects at universities, private companies, and Government laboratories. About half are jointly sponsored with the offshore industry or other Government agencies.

A network of working groups known as Operations Technology Assessment Committees (OTAC) expedites the exchange of technical information in both MMS headquarters and regional offices. These OTAC's review operational problems, discuss technology needs, and recommend improvements in the MMS regulatory program. Scientific and engineering investigators serve as staff adjuncts by participating at OTAC meetings in discussions of their specialties, thus exchanging new technologies information. This OTAC network, together with the TA&R program, is a primary way for MMS to comply with the OCSLA section 21(b) requirements to use the "best available and safest technologies which the Secretary determines to be economically feasible." The 1988 publication, *Technology Assessment and Research Program for Offshore Minerals Operations*, MMS 88-0057 (OCS Study), is available without charge from Minerals Management Service, Technology Assessment and Research Branch, 381 Elden Street, MS 647, Herndon, VA 22070-4817, telephone number (703) 787-1559.

Safety Violations

During FY 1989, the U.S. Coast Guard conducted 30 investigations in response to 1,924 reports or allegations of violations of safety requirements on OCS facilities. As a result, 1,233 corrective requirements were issued. The Coast Guard also performed 609 inspections (some were multiple) of 3,871 offshore facilities in the waters of the four OCS regions. There were 1,263 more reports or allegations of violations in FY 1989 than in FY 1988. In addition, the number of investigations decreased from 86 in FY 1988 to 30 in FY 1989. Although the number of reports or allegations of violations increased on a per unit basis, the number of investigations of these discrepancies actually decreased since they were largely voluntarily attended to. As of September 30, 1989, a total of 3,871 offshore facilities stood in Federal waters.

Diving Studies

The Coast Guard was not invited to and did not participate in any diving studies pursuant to section 21(e) of the OCSLA, as amended (43 U.S.C. 1347(e)), during FY 1989. The Department of Commerce is identified under section 21(e) as the lead agency to work with the Coast Guard and the National Institute of Occupational Safety in conducting such studies.

Other OCS Programs

The MMS performs numerous support functions related to leasing and production operations on the OCS. Those performed in FY 1989 are summarized below.

Bidding Systems

Only cash bonus bidding with fixed royalty bidding systems were used in the three of the four FY 1989 sales actually held in 1989. (Bids for the fourth sale, Sale 92, North Aleutian Basin, scheduled to be held in FY 1986, were opened in October 1988 following resolution of litigation.) The 16 2/3-percent royalty rate (1/6 of production value) is used for the shallow-water, low-cost areas, whereas the 12 1/2-percent royalty rate (1/8 of production value) is for the deeper water, high-cost areas. Ordinarily, royalty rate differences are based on water depth, except in Alaska where royalty rates are selected on a sale-specific basis. Table 10 shows the water depth limits that constitute the 1/8 royalty demarcations for all OCS regions.

No changes affecting bid adequacy procedures for fair market value were made in FY 1989.

Table 10. *Water Depth Limits For 1/8 Royalty Demarcation*

Region	Water Depth
Alaska OCS	variable
Atlantic OCS	200 meters
Gulf of Mexico OCS	400 meters
Pacific OCS	200 meters

Environmental Studies

In FY 1989, the MMS spent nearly $21 million for offshore environmental, social, and economic studies under the oil and gas program. The studies were performed under contracts awarded to private businesses (42 percent), to other Federal agencies (32 percent), to research institutes (10 percent), to colleges and universities (15 percent), and to State governments (less than 1 percent). These percentages reflect only the initial transfer of funds.

Fund transfers by the MMS to other Federal agencies may be redistributed through contracts to private businesses and academic institutions. Environmental Studies Program funds are allocated annually to support both national and regional information needs. In FY 1989, these funds were expended by the MMS Offshore Program as shown in figure 10.

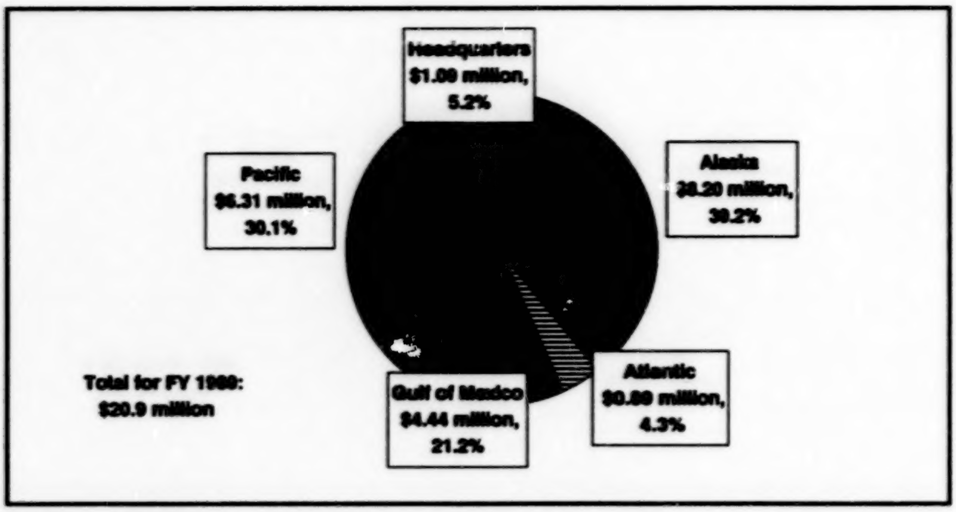


Figure 10. OCS Environmental Studies Program Funds Expended by Region/Office, FY 1989

Alaska: Most of the FY 1989 studies continued to focus on the Bering Sea and Arctic Ocean. Ongoing studies involve defining the habitat and migrations of endangered whales as well as the potential effects of offshore operations on these species. Such studies include continued aerial monitoring of bowhead whales in both the Beaufort and Chukchi Seas and a comparison of the Davis Strait stock of bowhead whales. Research for a book on bowhead whales and a study of the effect of offshore oil and gas production activities on arctic whales begun in FY 1988 continued into FY 1989.

Other ongoing studies focus on the potential effects of offshore oil and gas operations on arctic fish sensitivities and habitats and a better definition of the habitat of commercially important species of the coastal fisheries and related environments in the southern Bering Sea, particularly in the North Aleutian Basin.

Other continuing studies during FY 1989 included:

o Potential transport mechanisms of spilled oil that could affect the biota;

o An upgrade of the state-of-the-art oceanic circulation and oil-spill trajectory models to provide support to the Oil-Spill Risk Analysis (OSRA) model;

o The Social and Economic Studies Program in Alaska collection of information needed for environmental effects analysis;

o An assessment including a subsistence harvest study in Barrow and Wainwright (Arctic), a site-use study in Nuiqsut and Kaktovik (Arctic), a socioeconomic case study in Point Lay (Arctic), and institutional socioeconomic and subsistence studies in Bristol Bay (subarctic); and

- The social monitoring study done throughout Alaska that collected significant data on the effects of the Exxon *Valdez* oil spill.

A seminar, "Synthesis of Information on Causeways in the Nearshore Beaufort Sea, Alaska," held in Anchorage in April 1989 was attended by more than 200 scientists, administrators, agency personnel, and other interested parties. A workshop to examine the topic of mercury in the marine environment, especially in Norton Sound, Alaska, was held in Anchorage in November 1988.

The Alaska OCS Region continued to develop a working relationship with the Alaska Department of Fish and Game.

In addition, work continued on compiling shoreline and oceanographic data needed for a coastal and surf zone oil-spill transport model that was completed in 1988. Monitoring hydrocarbons and trace metals in the Beaufort Sea sediments and organisms continued with the establishment of a 1-year field sampling and laboratory analysis program to add to data collected from 1984 to 1986.

The Alaska OCS Region formed a basic agreement with the State of Alaska, the Department of Natural Resources, the National Ocean Survey (NOS), and the National Oceanic and Atmospheric Administration (NOAA) for the Alaska Federal-State Boundary Project. The agreement establishes the Federal-State Boundary Work Project (BWP), an interagency cooperative project, to share costs and expertise in collecting tidal observation and other survey data. (See page 50.)

Work with NOAA through the Outer Continental Shelf Environmental Assessment Program (OCSEAP) continued in the Alaska OCS Region. The MMS is currently the primary funder of OCSEAP, which is administered by NOAA under a basic agreement between the two agencies. The FY 1989 interagency agreement funded 12 Alaska studies in the biological and physical sciences. The MMS also has interagency agreements with the U.S. Fish and Wildlife Service (FWS) for three studies of waterfowl and seabirds in Alaska.

Atlantic: In FY 1989, circulation modeling of the Atlantic OCS, including the Florida Straits, and the effects of OCS oil and gas activities on marine mammals were the focus of the Atlantic OCS Region's Environmental Studies Program. Environmental Management studies included a submarine canyon workshop for the North Atlantic held in February 1989.

Continuing work initiated before FY 1989 included:

- The "Gulf Stream Frontal Dynamics Study Offshore North Carolina," which is being conducted under a formal Memorandum of Understanding with the State of North Carolina;

- The development of an "Ocean Circulation Model for the U.S. Atlantic Coast and Straits of Florida";
- A monograph on "U.S. Atlantic and Southeastern Gulf of Mexico Physical Oceanographic Processes Relevant to Offshore Oil and Gas Activities" that contains a literature survey on the physical oceanography of the Atlantic coast, including the Florida Straits;
- A study on the "Synthesis of Available Biological, Geological, Chemical, Socioeconomic, and Cultural Resource Information for the South Florida Area";
- A study on the "Evaluation of Satellite-Tracked Surface Drifting

Buoys in Simulating the Movement of Spilled Oil in the Marine Environment";

- A literature analysis of the effects of oil and noise on marine mammals; and
- A jointly funded study with the National Science Foundation to investigate habitat use by endangered whales within proposed North Atlantic leasing areas.

In FY 1989, planning for a physical oceanographic field study of the Straits of Florida was begun to acquire the necessary data to develop a three-dimensional general circulation model for the Straits of Florida. Also initiated was a study of the effects of OCS development on recreation and tourism. A study focusing on the nearshore distribution of endangered right whales off the coasts of Georgia and northern Florida was also initiated. In September 1989, the Atlantic OCS Region held its third Information Transfer Meeting (ITM).

Pacific: The Pacific OCS Region Environmental Studies Program expended over $6.3 million in FY 1989. Specific studies awarded in FY 1989 were:

- The "California, Oregon, and Washington Archaeological Resource Study";
- The "Potential Social and Economic Effects of OCS Oil and Gas Activities on Oregon and Washington Indian Tribes";
- A "Taxonomic Atlas of the Santa Maria Basin Fauna";
- A "Study of the Marbled Murrelet in California";
- The "Southern California Educational Initiative";
- The "Fugitive Hydrocarbon Air Emissions on OCS Platforms"; and
- The "Oregon and Washington Marine Mammal and Seabird Surveys" to collect baseline information on the distribution and abundance of these species.

Major continuing studies included:

- "Monitoring: Assessment of Long-Term Changes in Biological Communities, Phase II," an analysis of possible impacts to bottom-dwelling biological communities in the vicinity of OCS platforms in the Southern California Planning Area";

- The "Northern California Coastal Circulation Study"; and

- The "Study of the Rocky Intertidal Communities of Central and Northern California."

Lease Terms Amended During FY 1989

The four sales held during FY 1989 contained no significant changes in lease terms or conditions from sales held in previous years.

Agreements with Federal Agencies, States, and Local Governments

On June 13, 1983, the Secretary entered into a Memorandum of Understanding (MOU) with the State of North Carolina to resolve issues regarding Mid-Atlantic OCS oil and gas lease offerings. The MMS commissioned an initial assessment of how the effects of wind and Gulf Stream currents off the coast of North Carolina relate to oil-spill potential. As part of the MOU, MMS and the State's Office of Marine Affairs agreed to have the Oil Spill Risk Analysis (OSRA) Scientific Review Panel examine present OSRA methodology and recommend future methodologies for oil-spill assessment. The Atlantic OCS Region contracted for two studies in response to the OSRA Scientific Review Panel recommendations.

The first study was the development of a full-scale, three-dimensional numerical model of the ocean circulation along the entire Atlantic coast and Florida Straits, which simulates the effects of mesoscale features such as Gulf Stream frontal events on shelf circulation. The current fields simulated by the model will be used as input to the OSRA model.

The second study, completed in March 1989, was designed to provide site-specific information on the occurrence, frequency, and effect of Gulf Stream frontal eddies on shelf circulation off North Carolina. Study results have been incorporated into the ongoing development of a comprehensive Atlantic circulation model. Intermediate products from this comprehensive Atlantic circulation model are being entered in the MMS OSRA model.

As agreed between the Secretary in the Department of Interior and Governor Bob Martinez of Florida on June 16, 1988, two task forces worked throughout FY 1989 to analyze issues associated with exploratory drilling for oil and gas in the Eastern Gulf of Mexico area south of 26° North latitude and east of 86° West longitude. These task forces, made up of both State and Federal representatives assessed oil spill risks and other potential impacts that drilling operations could have on south Florida coastal and marine resources.

The Pacific Northwest Task Force met several times to discuss topics related to Sale 132, Washington-Oregon. The topics included environmental studies, area deferrals, and EIS timing. A Request for Interest is likely to be delayed.

The findings of the joint industry-agency Egg Larval Committee (ELC), of which the Pacific OCS Region was a member, were announced in 1989. The ELC concluded its work at the end of 1988 after 4 years. The ELC produced studies on the effects of airgun exposure on the eggs and larvae of the northern anchovy and Dungeness crab. Results indicate that there are no demonstrated effects on Dungeness crab eggs/larvae under the exposure conditions used in the experiments. Northern anchovy eggs and larvae show limited effects when in proximity (within 3 meters) of the sound source.

Joint Federal-State Marine Mining Projects: The Federal-State of Hawaii Coordination Committee anticipated completion of a joint EIS for the possible leasing of cobalt-rich manganese crusts offshore Hawaii and Johnston Island in late 1989. A new Joint Planning Arrangement, completed in December 1988, increases the State's participation in planning and review of offshore activities and coordination on program and policy issues. New initiatives include publication of a Request for Interest after completion of the EIS, followed by an early 1990 workshop to assess industry's near-term interest.

In May 1988, the Federal-State of North Carolina task force completed an economic feasibility study on the resource potential of offshore phosphorite deposits in Onslow Bay. Public and industry comments received on the study were summarized in a report to MMS and the State in August 1988. Because of passive interest by industry at that time, the Task Force recommended in March 1989 that it continue to monitor any new developements and indications of industry interest and initiative.

A Federal-State of Georgia Task Force, established in October 1986, conducted a preliminary offshore assessment of heavy minerals and phosphorites. As a result of the study's findings and continued State and private business interest, a new cooperative agreement was signed in September 1989. Future tasks are focused on limited data acquisition and analysis designed to further knowledge of the near-term commercial viability of developing the offshore deposits.

In February 1989, a final report entitled "Preliminary Assessment of Non-Fuel Mineral Resources in the Outer Continental Shelf Exclusive Economic Zone of the Gulf of Mexico" was completed by the State-Federal Gulf Task Force. Based on results of the study offshore Alabama, Louisiana, Mississippi, and Texas, a new cooperative agreement signed in August 1989 will focus on beach nourishment and restoration of barrier islands. Specific tasks underway include geologic, engineering, economic, and environmental analyses of Ship Shoal, Louisiana, as a sand source for Isles Dernieres and nearby Bayou Lafourche shoreline.

The Federal-State of Alaska Coordination Team continued its prelease activities for a proposed OCS Mining Program lease sale offshore Nome in Norton Sound. Its focus is an extension of gold dredging, under a State lease, into adjacent Federal waters. A draft EIS was completed in November 1988, followed by a "Mercury in the Marine Environment" workshop held in December. Public hearings on the draft EIS were held in January 1989. In response to public health concerns and availability of substantial new data, a decision was made to prepare a new draft EIS. Incorporation of the new information and completion of the EIS will move the lease sale into early 1991.

The Federal-State of Oregon Task Force's initial analysis of environmental impacts and the economic potential of developing the offshore black sand deposits was completed in September 1989. Based on existing data, results indicate a lack of adequate data to conduct a definitive resource assessment and to gauge near-term commercial viability. A final report and recommendations for future activities will be forwarded to the Department of the Interior and the State for consideration in January 1990.

Consultations with Federal and State Agencies and Private Groups

The MMS consulted during FY 1989 with other Federal and State agencies, the oil and gas industry, environmental organizations, educational and scientific organizations, special interest groups, and private citizens. Consultations at national and regional levels enabled other agencies, the public, and industry to offer many varied comments on the OCS leasing program, the planning of individual sales, and other phases of oil and gas and nonenergy minerals development in Federal offshore waters. Other formal MMS meetings included those of the OCS Advisory Board's components: the OCS Policy Committee, the six Regional Technical Working Groups (RTWG's), and the OCS Scientific Committee. Informal meetings were also held among MMS officials, other Federal agencies, State bodies, and concerned citizen groups.

The President's OCS Leasing and Development Task Force: On March 21, 1989, the White House established the Outer Continental Shelf Leasing and Development Task Force formalizing the task force the President identified in his FY 1990 budget proposal. The task force was charged with reviewing and resolving environmental concerns associated with Northern California Sale 91, Southern California Sale 95, and Sale 116--Part II, offshore Southwestern Florida. Members included the Secretary of the Interior (who serves as chairman), the Secretary of the Department of Energy, Director of the Office of Management and Budget, the Administrator of the Environmental Protection Agency, and the Administrator of NOAA, or their designees. The task force was assisted in evaluating the environmental and resource information available for the study areas by the National Academy of Sciences. Between May and July 1989, the task force met with the California and Florida congressional delegations and held public workshops in California and Florida coastal communties.

The task force staff worked with information from a variety of sources including information shared at the workshops and briefings and also with comments received in response to a staff draft of options and concerns identified through the task force's public participation process. A summary of discussions held at task force workshops was published in the *Federal Register* for public comment in August 1989. The 70 comments received were used to develop the report along with information and analytical documents relevant to the study areas supplied by the MMS. The National Academy of Sciences and the National Research

Council provided the task force with reports on the adequacy of environmental information and hydrocarbon resource estimates for the areas offshore California and Florida on November 3, 1989. (The task force delivered its report to the President on January 4, 1990.)

OCS Advisory Board: Established in 1975, the OCS Advisory Board counsels and informs the Secretary, the Director of the MMS, and other officers of the Department of the Interior on the performance of discretionary functions derived from the OCSLA, including all aspects of leasing, exploration, development, and protection of the natural and mineral resources of the OCS. The board includes the members of the OCS Policy Committee, the six RTWG committees, and the OCS Scientific Committee. The FY 1989 work of the eight committees is summarized in the next three subsections.

OCS Policy Committee: The OCS Policy Committee consists of one policy level member from each of the 23 coastal States and from Pennsylvania. Each is nominated by the respective State Governor for appointment by the Secretary, who also appoints up to 14 members from the public and private sectors to balance the background, constituency, points of view, and functions of the committee. In addition, the Secretary may appoint two ex-officio, at-large nonvoting Federal members. The Department of the Interior Assistant Secretaries for Land and Minerals Management, for Fish and Wildlife, and for National Park Service, or their representatives, plus the Director of the MMS, are also ex-officio nonvoting participants in the committee's activities. The Policy Committee provides advice to the Secretary on the discretionary aspects of the OCS Lands Act, as amended, and focuses on issues of national concern.

During FY 1989, the committee met once to develop a report and provided recommendations regarding the development of the 5-year leasing program. The recommendations are being implemented by MMS. The committee also appointed a subcommittee to review the analyses of the Exxon *Valdez* oil spill and provide recommendations relevant to the OCS oil and gas program.

RTWG Committees: The six RTWG committees represent the North Atlantic, Mid-Atlantic, South Atlantic, Gulf of Mexico, Pacific, and Alaska OCS regions. They advise the Director of the MMS on technical matters of regional concern regarding OCS prelease and postlease activities.

The Governors of the coastal States (except Hawaii) and Pennsylvania each nominate one member for appointment to the appropriate RTWG by the Secretary. In addition, the Secretary appoints other public and private sector representatives to the six committees. The U.S. Coast Guard, EPA, Department of Defense, NOAA, and FWS are nonvoting members. The Secretary also may appoint two ex-officio nonvoting Federal members to each RTWG Committee.

Each RTWG committee is cochaired by a State representative and the appropriate Regional Director of the MMS. The Regional Director's staff provides support for the respective committees. The RTWG's maintain a balanced membership to assure that the Director of the MMS gets timely technical advice that is representative of significant, differing viewpoints within the States and regions. Total membership is approximately 120.

The RTWG committees regularly focus on technical items involving offshore prelease and postlease activities of regional interest. Transcripts/minutes of each of the six RTWG meetings held in FY 1989, the recommendations made, and copies of all studies and reports issued or approved in conjunction with the activities of the working group are available for public inspection at the appropriate OCS regional office. (See following discussion of regional consultations, p. 46 for more detailed descriptions of FY 1989 activities.)

Following the July 14, 1989, *Federal Register* notice announcing the preparation of a new 5-year oil and gas leasing program, MMS respresentatives made presentations at four RTWG meetings and held individual meetings with representatives of five coastal States and seven Federal agencies. In addition, Alaska, Oregon, and Washington were contacted by telephone.

Meetings were held with representatives of the NOAA, National Aeronautic and Space Administration, Department of Justice, Department of Energy, Environmental Protection Agency, FWS, and National Parks Service. The Departments of State and Defense were contacted by telephone.

OCS Scientific Committee: The OCS Scientific Committee advises the Director of the MMS on the feasibility, appropriateness, and scientific value of the Environmental Studies Program. The committee reviews the relevance of data produced by the program and recommends changes in its scope, direction, and emphasis. The Scientific Committee has from 10 to 15 members who are appointed for 2-year terms by the Secretary. These appointments are based on each appointee's scientific competence and relevant technical skills. The Director of the MMS designates an executive officer and provides administrative support. Subdivided into topically oriented subcommittees and task forces, each of the committee's subgroups meets to discuss issues important to the program. During the past year, each subcommittee or task force convened at least once to review topics such as offshore fisheries, coastal socioeconomics, mitigation of onshore impacts, and environmental effects. Two plenary sessions were held in FY 1989.

Modeling Review Board: The initial meeting of the interim Modeling Review Board (MRB) was held in FY 1989. A full board will be appointed in FY 1990. The MRB will provide expertise used to advise the agency on specific technical aspects of study efforts and to improve long-range plans for ocean circulation modeling considering funding constraints. The full MRB will consist of four members providing services over a 2-year term. The first meeting addressed a review of statements of work for circulation modeling in the Gulf of Mexico and off the Pacific coast.

Endangered Species and Marine Mammals: During FY 1989, the MMS initiated or reinitiated 21 formal consultations with the National Marine Fisheries Service (NMFS)/FWS under section 7 of the Endangered Species Act (ESA).

Consultations with the NMFS and the MMS addressed temporary suspension of the seasonal drilling restriction in the Beaufort Sea to study the effects of exploratory drilling noise on migrating bowhead whales. In addition, 106 proposals by the oil and gas industry to remove platforms or structures in the Gulf of Mexico were addressed. On July 25, 1988, the NMFS issued a "generic" biological opinion, encompassing a class of proposed structure removals. The biological opinion limits both the kind and size of explosives that may be used and requires the detonation of explosives at a minimum of 15 feet below the "mud line" (the interface between the ocean bottom and the overlying water). The opinion also addressed a plan to put into a new category all proposed removals employing limited kinds and sizes of explosives detonated during daylight hours at a minimum prescribed distance below the mud line.

In November 1986, the MMS began consultations with the NMFS on platform and structure removals requiring use of explosives that could kill or injure endangered marine turtles in the vicinity. Such consultations are expedited to produce biological opinions within 30 days rather than the maximum 135 days. However, individual expedited consultations have declined markedly in FY 1989 because about 95 percent of proposed removals employing explosives have been included under consultation for the class of standard removals. The removals have been subject to a specific set of incidental-take terms and conditions identified by NMFS in its biological opinion for this category of standard removals. These terms establish the number of turtles that may be "taken" before MMS must reinitiate consultation. Conditions include all the protective measures that the operator must take to ensure that turtles and marine mammals are not affected during the structure-removal operations.

Of the 106 structure-removal proposals submitted in FY 1989, only 5 have required individual consultations. The remaining 101 proposals met the terms and conditions of the "generic" biological opinion for this category of removals, or the operator proposed using nonexplosive means to remove the structure(s).

During FY 1988, draft procedural guidance for MMS use was developed on Endangered Species Act biological assessments for joint consultations with or on behalf of other Federal agencies in which MMS jurisdiction or authority overlaps or complements. These procedures augment the revised FWS and NMFS section 7 implementation regulations of June 1986. The MMS continued to develop and implement these guidelines in FY 1989 with the assistance and cooperation of the FWS and the NMFS.

The MMS management and staff met both formally and informally to discuss OCS and endangered species/marine mammal topics with representatives of other Federal units, State and local governments, industry, and special interest groups. Noteworthy examples include meetings with the following:

- A consultation initiated in FY 1988 that relates to the proposed OCS Mining Program, Norton Sound Lease Sale continued into FY 1989. A final biological opinion was received from the FWS on June 7, 1989.

Informal consultation has continued, and reinitiation of formal consultation is to occur in FY 1990 due to new information on trace metal data, especially mercury.

- Consultation for Sale 107 continued from FY 1988 to FY 1989. The MMS received final biological opinions from both the FWS and the NMFS in June, 1989.

- Formal consultation with the FWS and the NMFS was initiated for Sale 101. Since the sale has been postponed, work on this biological opinion has been delayed.

Arctic Research and Policy Act: The MMS staff from the Alaska OCS Region and Headquarters, along with representatives from other State and local governments, participated in updating appropriate documents and presented testimony at the invitation of the Arctic Research Commission.

National Ocean Pollution Policy Board: MMS Headquarters and the Alaska OCS Region staff participated in developing the Draft Prince William Sound Extended Studies Program Plan. The Board's objective in planning the Extended Studies Program was to take maximum advantage of the unfortunate Exxon *Valdez* accident to study the fate and effects of crude oil in a sensitive cold water environment. The strategy of the Prince William Sound Extended Studies Program Plan is to coordinate closely with damage assessment studies required under law and to focus on priority research areas that have not been adequately addressed in the past.

National Oil and Gas Resource Assessment: In FY 1989, the MMS and the U.S. Geological Survey (USGS) completed their assessment of the hydrocarbon resources of the onshore and offshore petroleum provinces of the United States. The MMS developed estimates for the Federal offshore areas to the maximum extent of the Exclusive Economic Zone, while the USGS developed estimates for the onshore areas and the marine areas shoreward of the Federal-State offshore boundaries. The MMS and USGS staff met regularly at both policy and technical levels for project planning, task formulation, and guideline development.

During FY 1989, a series of regional workshops provided a forum for State geologists, academia, and industry to discuss the methodologies and findings in the draft National Oil and Gas Resource Assessment with staff from the MMS and the USGS. The Association of American State Geologists coordinated the workshops, collected comments, and provided the agencies with a summary report evaluating the adequacy of the geologic data used. The Energy Information Administration and the American Petroleum Institute (API) also participated in the review and prepared their own independent reports. The National Academy of Sciences is conducting a study of the MMS and the USGS assessment methodologies to provide recommendations for further improvements future assessments. The final joint report on the National Assessment was released in August 1989. Free copies of the report are available from MMS, Offshore Resource Evaluation Division Herndon, VA. 22070-4817, (703) 787-1628, or FTS 393-1628.

Coastal Zone Management: In FY 1989, the MMS continued to participate in the reviews conducted by the Department of Commerce (DOC) of federally approved State coastal management programs and their proposed amendments. These MMS reviews are designed to provide the DOC with information to assure that national interests in the exploration and development of hydrocarbons and nonenergy minerals on the OCS are properly considered by, and balanced with, local interests in the State coastal management programs.

Regional Consultations and Related Activities

Sponsorship, through the RTWG committees, of regional Information Transfer Meetings (ITM) enables the MMS to successfully disseminate the results of the studies it funds through the Environmental Studies Program. A Gulf of Mexico ITM was scheduled in New Orleans, Louisiana, October 25-27, 1989; an Atlantic OCS Region ITM was held in Reston, Virginia, September 12-13, 1989; and a Pacific OCS Region ITM was held May 31-June 1, 1989, in Santa Barbara, California.

The ITM's purpose is to provide a forum to report on current work in progress, present the results of studies completed by MMS contractors, and serve as a forum for the exchange of technical information. An ITM may also include presentations by guest speakers from industry, academia, and other Federal and State agencies. The proceedings of each meeting are available from the respective MMS regional office.

The regional ITM requirement stems from a December 1982 resolution of the OCS Advisory Board's Policy Committee that recommended that the MMS conduct at least one technical ITM each year in each OCS region. Originally, these meetings were included in RTWG schedules; however, the resolution was modified so that ITM's are now conducted on a basis of need. The Scientific Committee of the OCS Advisory Board also endorsed the ITM concept.

Alaska: A scoping meeting was held for two sales in the Alaska OCS Region during FY 1989. The scoping meeting for Sale 124, Beaufort Sea, and Sale 126, Chukchi Sea, was scheduled for December 7, 1989, in Barrow, Alaska.

The Alaska RTWG met twice during FY 1989, in April and September in Anchorage. Topics included:

- Results of MMS information meetings, such as mercury in the marine environment and a causeway synthesis meeting;
- The Arctic Oil-Spill Research Plan;
- MMS involvement in U.S.-U.S.S.R. scientific exchange;
- An oil-spill effects study off Panama;
- A report on 1987 and 1988 bowhead whale survey work;
- Shell Western E&P Inc.'s exploration activity in the Chukchi Sea;
- The Exxon *Valdez* oil spill;

- An overview of MMS oil-spill contingency plan requirements and task force report; and

- MMS's Technology Assessment and Research Program.

Atlantic: The Atlantic OCS Region hosted an Environmental Studies Workshop (ESW) in Herndon, Virginia, on May 23-24, 1989. The ESW participants, consisting of RTWG representatives, provided input to the Atlantic FY 1991-1992 Regional Studies Plan.

In August 1989, six public meetings were held in four North Carolina locations (Beaufort, Washington, Manteo, and Raleigh) to define the scope of the Environmental Report (ER) that MMS is preparing for potential exploratory drilling offshore North Carolina.

The Third Atlantic OCS Region ITM was held in Reston, Virginia, on September 12-13, 1989.

Gulf of Mexico: Two RTWG meetings were held in Louisiana and one meeting was held in Florida during FY 1989. At the October 1988 meeting in New Orleans, Louisiana, topics included Gulf of Mexico Current Activities and Prioritization of Species of Concern for Dispersant Bioassays. Topics for the March 1989 meeting in Jefferson, Louisiana, included a review of the Draft Regional Studies Plan for FY 1991, a presentation on the Freeport McMoRan Sulphur Project, and a status report of the Environmental Studies Program.

At the third meeting in August 1989 in Tallahassee, Florida, the agenda included a presentation on "Gulf of Mexico Trends in Leasing, Exploration and Development"; a discussion of the Exxon *Valdez* Oil

Spill - Government's and Industry's Response; a status of the Call for Information, Proposed Sales 131/135/137; and the status of the Presidential Task Force and the State-Federal Gulf Task Force.

The final EIS for Sales 123 and 125 was distributed in August 1989. Sales will be held in March and August, 1990.

Pacific: The Pacific Northwest OCS Task Force was established in January 1989 to advise the Secretary on issues related to potential OCS oil and gas leasing, exploration, and development in the Washington-Oregon Planning Area. This joint Federal-State-Tribal Task Force examines the diverse environmental and technical issues associated with leasing lands offshore Washington and Oregon. The steering committee of the Pacific Northwest OCS Task Force -- composed of one representative of the Department of the Interior, two representatives of the Governors, and two representatives of tribal governments -- held three public meetings during FY 1989. They created a scientific subcommittee to provide technical advice to the steering committee. The task force is charged with addressing environmental studies planning and implementation, lease sale timing and area identification, and the preparation of EIS's.

The MMS and the State of Oregon have met and agreed to enter a joint reconnaissance project designed to research, identify, and resolve baseline point issues along the entire Oregon coastline.

A Pacific ITM was held in Santa Barbara in May 1989. The executive director of the Presidential Task Force, the president of the local Sierra Club chapter, a representative from the California Office of the Secretary of Environmental Affairs, and others discussed potential risks of offshore oil and gas operations and benefits from oil and gas production.

OCS Information Program

The OCS Information Program (OCSIP) was established in 1978 as mandated in section 26 of the OCSLAA, which requires making available summary information on OCS oil and gas activities to State and local planning officials. The program is maintained in the Office of Offshore Information and Publications, (OIP), Herndon, Virginia, where all of its reports can be obtained.

The *OCS Regional Update* reports on OCS planning areas, providing State, regional, and local planners with current information to use in anticipating and planning for onshore impacts of offshore oil and gas activities. Industry representatives, private citizens, and Federal officials also use these reports extensively. The reports summarize resources and reserve estimates; the magnitude and timing of exploration, development, and production activities; pipeline locations and transportation strategies; and the nature and location of onshore facilities. Relevant information is also given on Federal, State, and local studies and issues. The summary reports synthesize information gained during field interviews with Federal, State and local government representatives and with the private sector. That information, in turn, is coupled with analyses of pertinent Government and industry studies and publications.

In addition to the regional updates, the OCSIP publishes several other OCS reference reports: an *OCS Directory of Federal and State Agencies* involved in the OCS Oil and Gas Leasing Program; *OCS Laws Related to Mineral Resource Activities on the Outer Continental Shelf*, which is a compilation of applicable Federal laws; *OCS Regulations Related to Mineral Resource Activities on the Outer Continental Shelf*, a compilation of applicable Federal regulations; and a map plate series depicting regional offshore oil and gas activities and coastal facilities related to these activities.

The OIP also produces the *Oil & Gas Leasing/Production Program: Annual Reports* for each fiscal year and the *Federal Offshore Statistics: Leasing, Exploration, Production, & Revenues* for each calendar year.

Scientific and Technical Publications Program

The offshore scientific and technical publications program was established in 1984 with the goal of creating a formal system for producing, editing, and disseminating the technical reports and investigations of MMS's offshore oil and gas program. In FY 1989, the Technical Publications Unit, within the Office of Offshore Information and Publications, processed over 100 technical reports and professional presentations. Graphic design standards developed by the program for OCS technical publications were expanded to cover all printed materials MMS-wide. The MMS won a prestigious Presidential Design Achievement Award from the National Endowment for the Arts for these graphic design formats. The Technical Publications Unit issues quarterly and annual catalogs of OCS scientific and technical publications that are distributed to the public and to libraries throughout the country.

Five-Year OCS Oil and Gas Leasing Program

The current 5-year OCS Oil and Gas Leasing Program was approved on July 2, 1987, and expires on July 1, 1992. The initiation of development of a new 5-year leasing program (1992-1997) was announced in a *Federal Register* notice on July 14, 1989. The notice requested general comments on the size, timing, and location of leasing activity. It also asked the coastal State Governors to identify and provide summaries of their State's relevant laws, goals, or policies. In addition, the Governors are to determine coastal zone management issues that may arise if oil and gas exploration and development occur as a result of the new program. Industry is to identify and rank offshore areas for potential oil and gas development.

The information received from the States, industry, and other commenters, along with the results of MMS's environmental studies and other available data, is to be analyzed and used to develop a Draft Proposed Program (DPP). Recommendations from the Presidential Task Force on OCS Leasing, (delivered to the President on January 4, 1990), also are to be included. The DPP is to be published in March 1990 when it will be distributed for a 60-day review by the Governors, Federal agencies, and the public.

Information obtained in the review will be used to revise and update the DPP. A Proposed Program is targeted for distribution along with a draft EIS in November 1990. The Governors, Federal agencies, and the public will have 90 days to comment on the Proposed Program. Final approval of the new 5-year program is scheduled for November 1991.

OCS Referral Center

The OCS Referral Center was established in 1978 in response to an OCS Advisory Board request for a single information contact within the Department of the Interior for OCS activities. The staff answers questions from the public, Federal agencies, States, industry, private organizations, and the Congress. Inquiries are either answered directly at the Center or are referred to the MMS office or individual with expertise on a given subject. The Center is operated by the Office of Offshore Information and Publications.

Alaska Federal-State Boundary Project

The Alaska Federal-State Boundary Project consists of representatives from the MMS, the National Ocean Service, and the State of Alaska. In March 1989, an aerial reconnaissance of the shoreline of the Shelikof Strait was conducted for Sale 114, Gulf of Alaska/Cook Inlet, and in May 1989, a similar reconnaissance was conducted from Cross Sound to Cape Yakataga in the Gulf of Alaska for the same sale. Also, in support of Sale 114, a photogrammetric survey of the seaward shoreline from Montague Island to Kayak Island was completed during July and August 1989. During June and July, 18 photogrammetric panels on the south shore of Bristol Bay were repaired. A salient point survey in the area of the State offshore platinum sale at Goodnews Bay was completed in July 1989.

OCS Oil and Gas Production Verification Program

The MMS has developed a production verification program to assure that volumes of oil and gas are reported accurately for royalty purposes. The Gulf of Mexico OCS Region began the nationwide program by assigning additional responsibilities to an existing organization unit.

The objectives of the verification program are to:

- Perform annual inspection of all (currently 392) onshore and offshore custody transfer liquid measurement locations for site security, verification of sales volumes, and compliance with regulations;
- Perform onsite production verification and inspections as needed to respond to discrepancies noted in the records being reviewed;
- Verify crude oil production by analyzing run tickets, meter proving reports, and system sales allocation reports on a continuous basis to detect underreported crude oil production; and
- Conduct a pilot gas production verification project involving 48 high volume meters in the Gulf of Mexico OCS Region to determine whether a complete gas verification program is also needed.

Liquid Verification System (LVS): The Gulf of Mexico OCS Region oil verification program, known as the Liquid Verification System (LVS), began in May 1989. After the system design was modified to accommodate the various formats used by industry for the data and calculations, the system now seems to be operating satisfactorily. Volume discrepancies detected and verified are now forwarded to MMS's Royalty Management Program each month.

Gas Verification System (GVS): The GVS is presently a pilot study to determine whether a system similar to LVS should be implemented for gas. The study involved 48 gas measurement locations (106 gas meters) for a 6-month period, October 1988 through March 1989. Volume comparisons will be made annually using gas volume statements. Gas volume calculations will be checked through a commercial software package. Operators were asked to submit the required data in April 1989, and all the information has been received. The study is expected to be completed as scheduled, and results and recommendations should be made by October 1990.

Alaska Region's Support in Response to Exxon *Valdez* Oil Spill

On March 24, 1989, the super tanker Exxon *Valdez* ran aground in State waters in Prince William Sound spilling over 250,000 barrels of North Slope crude oil. Although MMS has no direct reponsibility for response or damage assessment work with respect to the Prince William Sound oil spill, it provided both staff and monetary support to those who do. The following summarizes support the MMS provided to the State of Alaska, other bureaus within the Department of the Interior, and other Federal agencies in response to the Exxon *Valdez* oil spill in Prince William Sound.

- Convened in response to the oil spill, Federal-State workshops were held by the Commissioner of the Alaska Department of Fish and Game (ADF&G) and the Alaska Regional Director of the NMFS in Cordova and Anchorage, Alaska. Their purpose was to develop an integrated research program to assess possible damage to Prince William Sound fisheries resources, marine and terrestrial mammals, sea and shore birds, and intertidal organisms. The Alaska OCS Region participated in three such meetings.

- Participated in the National Ocean Pollution Policy Board planning meeting to develop an extended study plan for the Prince William Sound oil spill;

- Provided oil-spill risk analysis input to the oil spill Regional Response Team;

- Provided technical assistance to the FWS during aerial and shipboard surveys of sea birds and marine mammals, and at FWS bird and sea otter centers;

- Provided staff assistance to the FWS and the ADF&G by participating as members of a Resource Advisory Team in Prince William Sound. The multiagency team monitored treatment operations in the field and provided advice to a Shoreline Cleanup Oversight Team, including the State and Federal On-Scene Coordinators, on compliance with best-management practices, the need for modifications to field treatment operations, and protection of the resources on and near the shorelines being treated;

- Provided funding to FWS for air support for a study to observe and count sea otters;

- Continued to support staff assistance to develop the damage assessment of the economic effects of the spill;

- Funded the NMFS Auke Bay Laboratory to provide initial travel and per diem costs to enable their scientists to reoccupy 12 intertidal stations in Prince William Sound. Many of these stations were previously occupied under the MMS-funded OCS Environmental Assessment Program managed by the NOAA;

- Supported the participation of a Canadian herring biologist in the joint Federal-State planning process to develop an integrated herring research program;

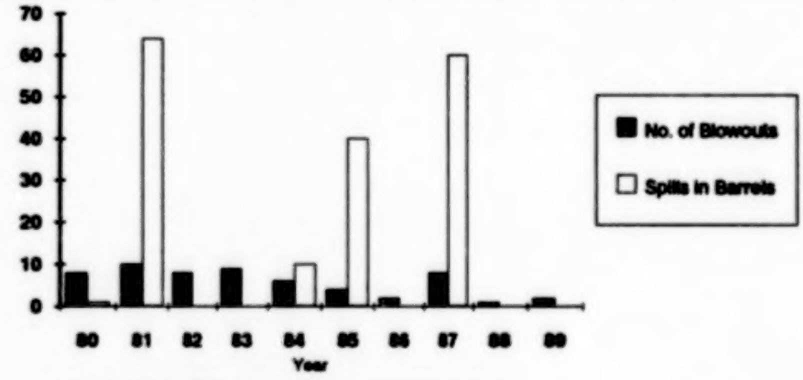
- Provided funding to NOAA to transport and operate an MMS-owned research vessel from Prudhoe Bay to Valdez and back again. The 36-foot vessel, operated by MMS and NOAA staff, was equipped to handle many over-the-side sampling requirements in response to the oil spill;

- Funded by MMS, Headquarters, Applied Science Associates deployed and tracked four satellite-tracked drifter buoys. Information derived from this study will be used to evaluate the efficacy of two buoy designs and to refine the Gulf of Alaska trajectory model;

o Funded by MMS, Headquarters, the USGS deployed the Gloria Project survey ship *Farnela* to take bottom-sediment samples in Prince William Sound along the trajectory of the oil from the Sound to Kodiak via the Shelikof Strait. This cruise was successfully completed with 15 stations occupied in Prince William Sound and 5 along the trajectory to Kodiak; and

o Provided staff assistance to the Department of Interior's Office of Environmental Project Review. Assistance included responding to telephone inquiries; collecting, compiling, and formatting budget information related to spill-response work being performed by Department of the Interior personnel; collecting and formatting bird and sea otter survey information for use in reports sent to Headquarters; and preparing summary minutes of Regional Response Team meetings.

Figure 11 shows blowouts and spillage in barrels from OCS wells over the past 10 calendar years.



Source: "Federal Offshore Statistics, 1980-1989," Table [illegible].
Note: Crude oil and condensate blowout spillage is given in barrels. Data are given for calendar years rather than fiscal years.

Figure 11. *Blowouts and Spillage from OCS Wells, Calendar Years 1980-1989*

Receipts, Obligations, And Expenditures -- FY 1989

Offshore Program Receipts	**Offshore Receipts**	
	Bonuses and Rents (Account 141820)*	$ 867,545,267
	Royalties (Account 142020)**	2,061,666,495
	Interest on Escrow Release(Account 141493)	1,447,667
	Total Receipts	**$2,930,659,429**
	Escrow (Accounts 14X6704 & 14X6707)	
	Bonuses	$ -----------------
	Rents	132,252
	Interest	62,219,727
	Royalties	-------------------
	Total 6704 & 6707 Escrow	**62,351,979**
	Total Receipts & Escrow	**$ 2,993,011,408**
Offshore Program Obligations (estimated)	Salaries and Benefits	$ 50,970,083
	Travel and Per Diem	22,362,211
	Contractual Service	33,712,771
	Other	3,636,560
	Total Program Obligations	**$ 90,681,625**
Offshore Program Expenditures: Escrow Accounts	**Payment of OCS Section 8(g) & Section 7 (partial distribution) During FY 1988**	
	Federal share	$ -----------------
	States' share	46,849,754
	Total Section 8(g) & Partial Section 7 Payments	**$ 46,849,754**
	Beaufort Sea Section 7 (undistributed) as of 09/30/88	
	Bonuses	$429,875,468
	Rents	1,977,129
	Interest Realized	532,830,245
	Total Section 7 Balance	**$ 964,682,842**
	Interest Accrued (estimated) on Outstanding Investments	$ 28,364,180

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*Includes transfers from Account 141820 of $859,761,232 to the Land and Water Conservation Fund; and from Account 142020 of $150,000,000 to the Historic Preservation Fund, which also includes the release of escrow accounts.

**Royalties (Accunt 142020) are net after payment of Windfall Profit Tax and include the release of escrow funds.

Note: Interest Realized is the difference between the cost of purchased securities and cash received (face value) upon their redemption. Interest Accrued is an estimated amount computed under the assumption that outstanding securities will be redeemed at maturity. A premature redemption could result in either gain or loss, depending on the market value of the securities at that time; however, no premature redemptions are anticipated.

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Recommendations to the Congress

Section 15(1)(E) of the OCSLA, as amended (43 U.S.C. 1343(1)(e)), requires that the Secretary of the Interior submit to the President of the Senate and the Speaker of the House of Representatives as part of the Annual Report on the OCS Oil and Gas Leasing and Production Program:

> (E) recommendations to the Congress (i) for improvements in management, safety, and amount of production from leasing and operations in the Outer Continental Shelf, (ii) for resolution of jurisdictional conflicts or ambiguities.

The Department of the Interior has no recommendations at this time on these matters.

END

11—25—91